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OF

MEDICINE AND SURGERY

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J. J. CASSIDY, M.D., EDITOR.

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The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

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Original Contributions.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else. — RUSKIN.

THE OPERATIVE TREATMENT OF MAMMARY CARCINOMA.*

BY GEORGE T. M'KEOUGH, M.D., M.R.C.S.ENG., L.R.C.P.EDIN.,
CHATHAM, ONTARIO.

WITH the exception of the marvellous advance in abdominal surgery, there has been no greater progress in the whole field of surgical science during the past decade than in the operative treatment of mammary carcinoma. I believe that the surgical treatment of breast cancer, as formerly carried out, did more to produce a want of confidence in surgical skill and to foster charlatans than any other surgical procedure.

During my student days, some twenty years ago, the operation for cancer of the mammary gland was a very simple one—an elliptical incision: the breast, or rather a portion of it, removed: the axilla rarely entered, or, if attacked, very imperfectly so, and the pectoral fascia never touched. The consequence was that whilst the operation might have relieved pain and quieted the patient's anxiety with false hopes for a few short weeks, or possibly, if the tumor was ulcerating, got rid of a disagreeable mass, a cure was scarcely ever hoped for by the surgeon, as a recurrence was almost

* Read at meeting of Ontario Medical Association, Windsor, Ont., June, 1896.

inevitable, and if such a fortunate result ensued, it was looked upon as a piece of good luck rather than good surgery. When Billroth's results—eight cures only in 143 cases—were published in 1878, they were the best that had been given to the profession up to that date.

How different are the results that have been published within the past year by leading operators. Surgeons in giving their statistics have universally adopted Volkman's three-year limit—that is, they record as cures those cases which after the expiration of three years show perfect health, and no sign of any local recurrence. Dr. W. T. Bull, of New York, gives details of 118 cases, with 26.6 per cent. of recoveries. In 40 per cent. of his cured cases the axilla was involved, and in the cases in which the axilla was not infected he had 54 per cent. of recoveries. Dennis reports thirty-eight excisions of the breast for malignant disease, with 45 per cent. having passed successfully the three-year limit. Halstead has had about 50 per cent. of cures: and Watson Cheyne, in his Smithsonian lectures this year, gives the records of sixty-one unselected cases, many of them far advanced, all of them with disease in the axillary glands, with the remarkable result of 57 per cent. of cures.

These favorable results are due, first, to a more perfect surgical technique. Antiseptic and aseptic surgery have done almost as much for operations of the breast as for cœliotomies. They are also due to a better knowledge of the pathology of carcinoma and of the precise manner in which it spreads and infects surrounding tissues and organs.

Carcinomata are apparently on the increase, and the mammary gland is one of its most favorite seats. There can be no doubt that the earlier an operation is undertaken for cancer of the breast the more favorable will be the outcome. No medical man is justified in making light of a lump in the breast, and in elderly women he takes a great responsibility upon himself who is willing to watch the case for a diagnosis. As 90 per cent. of all tumors in the breast in women over forty are malignant, the sooner the growth is subjected to the radical or complete operation after it comes under observation the more favorable are the chances for a cure. When women are educated to know the importance of the early removal of these lumps, and with improved surgery they will learn, the surgeon will be consulted in an earlier stage of the development of the disease, and consequently the results will be

infinitely better. It is rare now for a medical man to see a case before the axillary or other glands are more or less invaded, and the chances of cure are very much greater if the operation can be performed before the infection of the adjacent lymphatic glands. It has been estimated that over nine thousand women die annually in the United States from cancer, and about one-fourth of these cases have their origin in the breast. One can therefore readily understand the importance of the subject for discussion, and the benefits that may accrue from proper operative treatment.

But it is not only necessary that the operation should be accomplished early, it is equally necessary that it should be thoroughly performed, no matter how soon the case comes under observation, as the cancer cells invade the lymphatic vessels and nearest glands in a very early stage of its history, and the object of the treatment should be the cure and not merely the temporary relief of symptoms. Dr. Nicholas Senn, in his recent address before the surgical section of the American Medical Association, puts the situation in a nutshell when he states that "the essential features in the modern treatment of malignant tumors may be summed up very briefly as follows: Operate early and thoroughly." With some surgeons the pendulum, however, seems to have swung too far. Amputation of the arm at the shoulder joint has been advocated in order to thoroughly remove all axillary complications. Mr. Arbuthnot Lane divides the clavicle in order to clear out the supra-clavicular glands. Halstead, of Johns Hopkins, removes in all cases the pectoralis major. Wilby Meyer, of New York, goes still farther and removes both the greater and lesser pectoral muscles. Such radical procedures, however, are apparently unnecessary, and in operable cases equal or better results are obtained with less aggressive surgery. When the disease is so diffuse that it is necessary to remove so much of the surrounding structures, the chances are that the disease is past cure by any operation. Watson Cheyne, whose results are as good if not superior to any that have been published, states that the "minimum operation for cancer of the breast that will offer any probability of cure must include the primary disease, the whole breast, the tissue in which the lymphatics run, including the pectoral fascia from the breast to the axilla and the whole of the axillary glands."

I believe this operation meets with the approval of most leading surgeons of experience, and any operation within these limits must be considered incomplete.

The same antiseptic and aseptic precautions should be taken in this operation as in an abdominal section. A general bath, shaving the arm pit, a thorough disinfection of the operative field the day previous to the operation, the parts protected with antiseptic gauze, with a farther cleansing and disinfection just before the operation. The first incision will depend partly upon the situation of the tumor, usually an elliptical or circular incision from the sternum to near the axilla answers. The amount of skin sacrificed should correspond to the prominent part of the organ: this is necessary even when the tissues are not attached to the adjacent skin or the nipple retracted, as the suspensory ligaments which extend from the breast tissue to the integument contain lymphatics, which early become infected with cancer cells. Every vestige of the mammary gland must be removed. The skin should be undermined and elevated, and all lobules of the breast, which sometimes extend in the fatty tissue nearly as high as the clavicle, onwards as far as the sternum, downwards to the abdominal muscles, and outwards and backwards to the latissimus dorsi, should be carefully detached and removed. The incision should extend down to the great pectoral muscle, and in order to completely remove the pectoral fascia in which the lymphatics proceed outwards, Cheyne recommends shaving off a layer of the pectoral muscle. This, I believe, should be done in all cases, and is sufficient usually without removing, as Halstead does, the entire muscle, unless nodules of cancer can be felt in the muscular substance, when the whole muscle should be removed with the breast. The functions of the arm and shoulder are much more impaired when the pectoral muscle is entirely removed; but when it becomes a question of cure or recurrence, the impairment of function should not be a point for debate. Haemorrhage is controlled by the hands of an assistant or by pressure forceps, and is usually not very profuse.

The axilla is attacked by an incision from the angle of the breast wound along the lower border of the pectoral muscle. After cutting through the skin and superficial fascia, the knife is discarded for the fingers or some blunt dissector, and the entire axilla, including the space between the two pectoral muscles, the space of Morbenheim, at the very apex of the axilla, up under the clavicle and even into the subclavian triangle of the neck, must be completely denuded of all fat, glands and lymphatics, until the important vessels and nerves stand out as in an anatomical dissection. It is almost the unanimous opinion of surgeons of experience that

the axilla should be opened up and cleaned out in every operation for malignant disease of the breast. Keen, who has operated over two hundred times, says that he cannot detect enlarged glands in the axilla once in ten times until it is opened. It is highly important that the breast and adjacent fat, including the glands and fat from the axilla, be removed *en masse* and not in piecemeal, as it is important that no diseased structure should be cut into, so as to obliterate cells which might infect healthy tissue. It is also an advantage in separating the glands and diseased tissue in the axilla to have them dragged down by the weight of the previously excised breast. An advantage in widely separating the skin for the removal of all possibly infected tissue is the greater facility with which the edges of the flaps will coaptate when brought together. If the skin will not readily come together, it is better to bring the flaps as close as possible without undue tension, and adopt skin grafting at the time or subsequently, in order to close the wound.

The dressing of the wound is important. If all oozing can be stopped and the parts left perfectly dry, drainage may be dispensed with, otherwise it is better to leave in a piece of sterile iodoform gauze for twenty-four hours. The wound should be united with interrupted silk-worm gut sutures. It is very necessary in applying the sterilized gauze dressings and bandage to have firm, equable pressure everywhere to completely close all dead spaces so as to prevent any accumulation of serum. The arm should be kept confined to the side for a few days. If drainage is not used the dressings will not require changing for a week or ten days, when the wound should be found perfectly healed.

The mortality from the complete operation is very small, considering the important structures exposed and the shock consequent upon a more or less prolonged operation. The results of a number of leading American surgeons who have published their results recently show a mortality of less than one per cent.

TWO CASES OF SLOW PULSE.*

BY P. A. DEWAR, M.D., C.M., ESSEX, ONT.

With no idea of bringing anything new, or even anything particularly instructive, to the majority of the members of the Association, but rather with the hope of receiving some information in the treatment of cases which have been to me very interesting and unusual, have I decided to call your attention to certain forms of slow pulse. Text books lay down fairly definite rules as to pulse rate and quality, yet none of us have been in practice very long before we begin to regard those cases of typical pulse the exception rather than the rule. The two cases which I wish to bring before you to-day are not, I think, ordinary when considered in this light even. The causes of slow and irregular heart's action are so numerous that the difficulty in any one case is not in assigning a cause for the trouble (to the patient, at least), but rather in determining which one of the many causes is to be credited, and removed, if possible, thereby treating the ailment in the only logical way by taking away the disturbing element and allowing nature to once more assert herself. Slowness of the pulse is seen by every busy practitioner almost daily; but the slowest of which I have seen any record is a case mentioned by Pepper of twenty-two to the minute. Flint mentions cases running as low as twenty-six to the minute—nearly always of a functional and temporary nature, and very rarely of intracranial origin. As my time is limited, and as I wish to bring the patients before the Association, I will give a brief synopsis of each one's history and be done:

Mr. Naylor, sixty-three years of age: habits active, physically and mentally; family history good, past history excellent; previous sickness, malaria five years ago, and acute rheumatism fourteen years, from both of which he made apparently good recoveries; habits, temperate. Was called to see him for his present disorder over two years ago. Condition, pale and haggard-looking: respiration, sighing; digestion, faulty: all the other organs, with the exception of heart, normal; heart beats, strong and regular: pulse, twenty-two to the minute, not accelerated by change of position nor on exercise, not easily compressed. Advised quiet and regulated diet, and gave digestives, thinking the condition of pulse

* Read at meeting of Ontario Medical Association, Windsor, Ont., June, 1896.

functional, and probably due to flatulent dyspepsia. Next day, pulse twenty; other conditions the same. The following day, the pulse having fallen to eighteen, had in consultation Dr. Inglis, who regarded the trouble as probably due to some central lesion. Next day the pulse fell to sixteen, and remained that way for one hour, and although we used every form of heart stimulant that two other medical men and myself could think of, we could not cause the pulse to go one beat faster. For two months the condition remained much the same, the pulse sometimes going as fast as thirty-six and frequently falling to twenty. At the end of that time he had distinct attacks of petit mal and twice convulsive seizures, in which he bit the tongue. During the last year the pulse had become rapid, weak and irregular, the heart dilated, and the patient presents many of the symptoms belonging to epilepsy, notably enfeebled memory.

The second case first came to me some months ago, stating that he felt well in every way, but consulted me because his friends were alarmed at attacks of loss of consciousness that he had suffered from at intervals. When I examined him I found a fairly healthy, strong and active man, with no other disorder apparent except that the pulse beats were irregular and running about twenty-five to the minute. Since then there has been little change in his condition, except that under the use of bromides the attacks (probably epileptic) have become rare.

Query, What is the connection, if any, between these cases of slow pulse and epilepsy?

Local Anæsthesia in Labor.

Dr. T. H. Weagly (*Times and Register*, October 5, 1895) has obtained excellent results in cases of rigidity of the cervix by local anæsthetics applied to the parts by a spray apparatus. He claims that the following solution will expedite and soothe the first stage of labor, and even when the occiput has entered deeply into the pelvis the pain accompanying the expulsion of the head may be reduced to a minimum by spraying the vaginal surface of the perineum and outlet.

℞ Phenolized cocaine solution (3 per cent.) ..... ℥ i.
Trinitrin solution (2 per cent.) ..... ♏ x.
Sulphate of strychnine ..... gr. $\frac{1}{6}$.
Listerine ..... ℥ i.

Gynæcology and Obstetrics.

A CASE IN PRACTICE.

On the 20th December last the writer saw, in consultation with Dr. T. McKenzie, a woman aged forty-two, in labor with her first child. She had then been ill about thirty-six hours, the membranes having ruptured with the onset of labor. The pains recurred every two or three minutes, were fairly severe, but without the bearing-down element which one would expect after that length of time. On making a digital examination the os was high up, dilated about the size of half a dollar, and while not being rigid, was not very dilatable. A vertex presentation at the brim was readily felt, but the position could not possibly be made out with any degree of certainty. The history of the case suggested an occipito-posterior position, and external palpation of the abdomen strengthened that supposition, but it was not until the patient was anæsthetized, the os dilated by the method suggested by Harris, of Paterson, N.J., and the whole hand introduced into the uterus, that we were able to decide positively that it was an occipito-posterior position, and the long diameter of the head in the right oblique diameter of the pelvis.

Three methods of delivery were now open to us and discussed briefly, the hand being kept in utero. One was to rotate the head manually, crowding over the body with the external hand. Another method was version, and the third was to temporize, allowing the case to go on in the hope that as the occiput reached the pelvic floor it would rotate into the second vertex position, when nature or the forceps would complete the delivery. This method seemed contra-indicated on account of the probable length of the labor, the possibility of a "persistent occipito-posterior" position and consequential certain death of the fœtus, and general bruising of the soft parts.

The first method was considered impracticable on account of the loss of liquor amnii so long before, and consequent moulding of the soft parts at the entrance to the brim, tending to produce a reversion to the original position, even if rotation were possible. We elected to try the second method, and though the uterine wall grasped the baby thoroughly, by steady pressure upward on the head for about a minute, then crowding the

buttocks over to the left and forward, one foot was easily reached, then the other, and version accomplised in a few minutes. The delivery of the head caused some considerable delay, but by adopting the Moriceau (or Veit-Smellie) method we succeeded in getting away a living baby weighing seven and a half pounds.

From the ragged appearance of the membranes, it was thought that a portion must have been retained. Digital palpation of the whole endometrium failed to find any portion of it. As the uterus was twice invaded by the hand, it was deemed prudent to flush it out with a hot 1-100 carbolic solution. Recovery normal. The practical deductions are :

1. That a long tedious first stage, with non-entrance into the brim, is presumptive of some abnormality.

2. That it is sometimes impossible to make out the position without an anæsthetic, and that even then one is occasionally unable to do so without the introduction of the hand within the os.

3. That version, though contrary to the ordinary text-book teaching, can be accomplished many hours after the liquor amnii has drained away.

4. That it is advisable to make an intrauterine search at the time, if there be a fair suspicion that a piece of membrane or placenta has been left behind.

5. That where the hand, or a hand of each of us, as in this case, has been within the uterus, an intrauterine douche is advisable.

6. That the technique was all that could be desired, as shown by the perfectly smooth recovery.

THE TREATMENT OF ECLAMPSIA.

(From the International Gynæcological Congress in Geneva.)

Charles : Eclampsia is the result of different causes, and accordingly more or less dangerous. Usually the result of poisoning of the blood by an accumulation of waste products normally removed by the liver and kidneys ; rarely of reflex nature. Intoxication of renal origin is most common, and generally accompanied by albuminuria and œdema of various parts of the body. Albuminuria, however, is not the cause of eclampsia, but only a disease symptom originating from the like cause. The disease is most frequent in primiparæ, but the death rate is higher in multiparæ. *Charpentier :*

The urine of every pregnant woman must be examined with great care at frequent intervals; when the presence of albumin in the urine shows that the woman is threatened with eclampsia, danger can be avoided by a strict milk diet. At the beginning of eclampsia venesection is indicated in women of robust constitution and with a cyanotic countenance; 300 to 500 grammes of blood should be abstracted. Afterwards chloral is administered. Eclamptic attacks are combated by chloroform inhalation, while diuresis is favored through subcutaneous infusions of physiological saline solution Whenever possible, the natural termination of labor is advised, and use of instruments is cautioned against. If, in spite of pains, delivery does not progress, version or forceps is indicated in the living child, otherwise craniotomy. The soft parts, however, must be dilated or easily dilatable before instrumental delivery should be attempted. The induction of premature labor should be reserved for exceptional cases. Cæsarean section and accouchement forcé are only permissible as *dernier ressorts* in desperate cases. *Veit:* Many cases will recover under any treatment. The proof that a forcible delivery in deep narcosis gives the best prognosis has as yet not been substantiated. The results obtained from the systematic administration of large doses of morphine have not been equalled by other methods. The favorable reports of success from venesection are not sufficient in number to permit the passing of final judgment. A rational therapy of eclampsia is not possible until the etiology is absolutely clear. Hastening of labor by rupturing the membranes, delivery after completion of dilatation, administration of large doses of morphine to diminish the frequency of attacks, no nourishment per os, and the production of diuresis through external means, is to-day the best and safest method of treatment. In exceptional cases more grave operations may be permissible. *Byers:* Elimination of toxins is hastened by an administration of hot baths and packs, cathartics and diaphoretics. If eclampsia occurs before the onset of labor, the latter should not be artificially stimulated. In intrapartum eclampsia the administration of chloroform and rapid termination of labor are advised. Rest, milk diet, laxations and hot baths are the best prophylactic therapy. *Tarnier:* Milk diet is the best prophylactic. Since 1892 he has treated cases of eclampsia with chloroform, chloral, venesection, and milk—the latter, if necessary, administered with the stomach tube. The mortality at his clinic has sunk to 9 per cent., and there has so far (September) not been a single death during

1896. *Lindfors* demonstrated specimens showing a dissemination of liver cells in the blood of eclamptic women. He drew particular attention to the fact that the emptying of the uterus is not always followed by a cessation of the eclamptic seizures. *Pancord* advises milk diet as the best known prophylactic *Queirel* observed during the years 1890-96, in 1,200 labor cases, twenty-seven cases of eclampsia; not one case originated in the hospital. He ascribes the absence of eclampsia among hospital cases to the rigid milk diet enforced in every case of albuminuria. *Morisani* draws attention to the cessation of albuminuria and eclamptic seizures after death of the fœtus. There must, therefore, be a certain connection between fœtus and eclampsia. In the treatment of eclampsia the following rules are laid down: Medical treatment only during the fourth and fifth months of pregnancy. In the beginning of labor after sufficient dilatation, immediate delivery is indicated. If the os is rigid and contracted, artificial dilatation, preferably with the finger. Dührssen's method of deep incisions is not favored: instead of these, he advises in desperate cases Cæsarean section. *Pasquali* agrees with Morisani, and *Fochier* believes that the cause of eclampsia is the resorption of digestive products by the stomach; he therefore recommends washing of the stomach and the instillation of milk and chloral.—*American Journal of Obstetrics.*

Pelvic Diseases and their Principal Causes. What Should the Laiety be Taught Concerning them?

John M. Duff says, in the *American Journal of Obstetrics*, November, 1896: One of the principal causes, and one which, I am sorry to say, is becoming more common every day, is criminal abortion. This increase is not due alone to an increase in illicit intercourse. There is a sadder side to the subject. This practice, soul-destroying, productive of moral depravity and of physical disease and pain, has invaded the sanctity of the marital chamber, where, in some communities at least, it is increasing to an alarming extent. The young married woman who desires a long honeymoon resorts to it because her pleasures must not be interrupted by the honest fruit of her womb; the woman of society, whose time is too precious to give to the care of children; the woman who believes she has already a family as large as she can support and care for—all unblushingly resort to it and thus lay the foundation for diseases

which will eventually make life a burden. My observation shows me that while much of this is done with a careless indifference to results, much of it is done through ignorance of its sinfulness and of its physical danger. The impression that it is sinless during the first three months of gestation, and that during this same period it is devoid of danger, has considerable to do with its frequency. He claims that the same life is destroyed at one month as is destroyed at four to six months, and to say it is sinless would be as unreasonable as to say it would be sinless to take the life of a boy of ten, but wicked, villainous murder to take the life of a man of fifty years of age. In regard to the various methods used to prevent conception, he thinks all of more or less harm, but he cannot abstain from criticizing the use of the intrauterine protector, the use of which is, he is told, encouraged by reputable practitioners to that extent that for a stated sum monthly they introduce it just after menstruation and remove it again prior to the next period. Such a practice cannot, it appears to him, eventually do otherwise than produce an endometritis which will entail a retinue of evils, the gravity of which it is terrible to contemplate. The invasion of disease may be so insidious as not for a long time to cause alarm; but these women will live to curse the man or woman through whose influence they were led to use them.

Intrauterine Medication.

W. S. Playfair, after discussing various methods of intrauterine treatment for diseases of the endometrium (excluding fibromata), in which he speaks favorably of applications of phenol and glycerine and the curette, says: "My own decided preference as a means of intrauterine medication is for the application of the negative current after the plan introduced by Apostoli. The precise method of action is doubtful, but it appears to modify the nutrition of the endometrium and its deep-seated glands in a very remarkable manner. I have rarely used more than five or six applications—generally three after one period and two after another - these consisting of from eighty to one hundred milliamperes of the regular current. This is practically painless, nor have I seen a single case in which subsequent mischief resulted. The efficiency of this method of intrauterine medication is best proved by the frequency with which it is followed by pregnancy in old-standing cases of

acquired sterility." He then goes on to speak of its drawbacks, the costly and elaborate plant required and the time and skill necessary during treatment. These difficulties make it quite intelligible to him why it has not been more generally used.—*Am. Jour. Obs.*

Increased Frequency of Cancer.

Roger Williams, in discussing this subject, says: "Probably no single factor is more potent in determining the outbreak of cancer, in the predisposed, than high feeding. There can be no doubt that the greed for food manifested by modern communities is altogether out of proportion to their present requirements. Many indications point to the gluttonous consumption of meat, which is such a characteristic feature of the age, as likely to be especially harmful in this respect. Statistics show that the consumption of meat has for many years been increasing by leaps and bounds, and it has now reached the amazing total of one hundred and twenty-six pounds per head per year, which is more than double what it was half a century ago, when the conditions of life were more consonant with high feeding.

"When excessive quantities of such highly stimulating forms of nutriment are ingested by persons whose cellular metabolism is defective, it seems probable that there may thus be excited, in those parts of the body where vital processes are still active, such excessive and disorderly cellular proliferation as may eventuate in cancer.

"No doubt other factors co-operate, and among these I should be especially inclined to name deficient exercise in the open air."—*Am. Jour. Obs*, from *Med. Chron.*

Menstruation.

H. M. Jones describes in the *Lancet* a case of intense vasomotor coloration of the face associated with dysmenorrhœa and oophoralgia. The ecchymoses of the cheek resembled at times that due to a severe contusion. The discoloration was chiefly below the eyes and in the malar region, but occasionally involved the forehead.—*Lancet*, Aug. 1st. H. T. M.

Medicine.

OBSERVATIONS ON THE SERUM REACTION IN TYPHOID FEVER AND EXPERIMENTAL CHOLERA BY THE DRIED BLOOD METHOD.

BY WYATT JOHNSTON, M.D., AND D. D. M'TAGGART, M.D., OF MONTREAL.

Abstract.

A GRATUITOUS public service of serum diagnosis was introduced last September by the Board of Health in the Province of Quebec. Suitable outfits for taking samples, consisting of pieces of sterilized paper enclosed in envelopes with printed directions and blank spaces for information to be filled in, have been placed in chemists' shops, where outfits for diphtheria diagnosis are already kept.

In case of a negative result and the suspicions of typhoid continue, a glass tube is furnished in which a duplicate sample of fresh blood is also required to be sent. A large drop of blood is allowed to dry on the sterilized paper. The drying of the blood is only for the purposes of easy transmission. At the laboratory the blood is moistened by a drop of sterilized water and then mixed with a drop of fresh and actively motile pure broth culture of typhoid bacillus and examined by the microscope. The motion rapidly stops and the bacilli run together in loose coils or clumps. This takes place usually in a few minutes, but sometimes may require three or four hours, and sometimes twenty-four hours. On the other hand the stoppage of motion may be instantaneous, and as this will delay rather than aid the formation of clumps, it is better to make a second sample, in which the serum is less concentrated. As a rule a slow reaction gives larger clumps than a quick one.

In a small proportion of cases in which the clumping proceeds in an atypical manner, a certain number of motile forms can be seen even after several hours. This partial or incomplete reaction we have met with chiefly (1) in the very early stages, (2) or late in convalescence, (3) in relapsing cases, and (4) in very mild cases.

The gradual and progressive loss of the motion, and the slow but steady growth of the clumps, together with the fact that the motion never becomes considerable, enables this incomplete reaction

to be distinguished without much difficulty from the brusque stoppage followed by the prompt reappearance and increased activity of motion occasionally seen when normal serum in concentrated form is mixed with a typhoid culture. Although aseptic precautions are not required when the action is complete within a few minutes, the occasional occurrence of this slowly developing reaction makes it necessary to guard as far as possible against the development of extraneous motile forms in the blood. As these might be present upon any odd piece of paper employed, special slips are provided with envelopes which have been sterilized. Positive results were obtained in 123, or 95 per cent., of the 129 cases which there was serious reason to believe were true typhoid.

If we exclude convalescent cases and cases in which no re-examination was obtained, there remains only one case of severe fever strongly resembling typhoid which did not react to the test made repeatedly under favorable conditions. In this case both the fresh serum and the dried blood were tested, and both gave negative, or at least indecisive, results.

Ninety-nine and four-tenths per cent. of cases examined under satisfactory conditions gave decisive results. Ninety per cent., however, is thought to be as high an average as can be expected in public health work. The reaction was found in sixteen out of seventeen cases, after intervals of from three weeks to three months after their discharge from the hospital.—*British Medical Journal.*

Retention of a Dead Ovum in the Uterus.

Graefe (*Festschrift Ruge's, Munch. Med. Woch.*) has not been able to arrive at any certain information as to the etiology of these cases from microscopical examination, though to eleven personal observations he has added fifty-nine published ones. After prolonged retention, retrograde metamorphosis is evident in the ovum. The mucous tissue becomes converted into more or less rigid connective tissue, but may even after months of retention be preserved in places, or even show patches of growth. The more developed the fruit, at the time of its death, the greater the danger for the mother. As soon as the diagnosis can be established, the uterus should be emptied—if in the first five months, by dilatation and clearing out the cavity with the finger, under an anæsthetic; if later by the induction of premature labor. W. J. W.

Therapeutics and Pharmacology.

CHRONIC RHEUMATISM TREATED BY INJECTIONS OF CHERON'S SERUM.

PATIENT was a man aged forty-nine who had been suffering from chronic rheumatism since he was thirty-seven, all the joints being successively affected, and where no result was obtained by any therapeutic method—arsenic, salicin, etc., proving useless. Cheron's serum was then tried, 5 to 10 c.cm. being injected daily, either into the deep muscles of the back or the tissues around the affected joint according to the part affected. The result was surprising, the patient being able to resume the movements of the joints. It would seem that the rheumatic condition continued, but its effects were kept in abeyance by the regular use of the injection.—*Journal de Méd.*, August 10th, 1896.

TREATMENT OF BURNS.

LINT soaked with warm carbolized carron oil, with a thick envelope of cotton wool, is perhaps the best application for the first week: but the nauseous smell of the linseed oil combined with the fetor of purulent discharge, is horribly offensive, and helps to keep up the tendency to diarrhœa common at this period, which is frequently attributed to duodenal ulcer. Let me recommend the following alternative treatment: Dress the vast beef-red profusely suppurating wounds with gall ointment thickly spread on strips of lint, or with ointment of galls and opium or boric ointment, having about a drachm of finely powdered galls to the ounce; wrap thickly in cotton wool and bandage firmly, not loosely. Improvement is rapid, the smell diminishes, and the sufferer finds the treatment comforting. The admirable effect of the gall ointment in coagulating albumen and restraining exuberant granulations would seem to suggest it as a usual dressing in these cases: but none of our authorities mention it, nor have I seen it used excepting by myself. Indeed the only mention of galls for treatment of burns that can be found in the "ever faithful ever sure"

Neale's "Digest" is an article written in 1852, claiming that ointment of galls prevents contraction of cicatrix. It is generally recommended that the bandages in these cases should be lightly put on. But the fungous granulations are certainly more effectually restrained by firm pressure over elastic cotton wool, and there can be no question that this treatment is more merciful than the application of nitrate of silver whilst equally useful.—S. Grose. M.D., F.R.C.S.Eng. in *Lancet*, March 23rd, 1895.

This is certainly an excellent method of treating burns, as I have treated several cases on a similar plan with gall ointment, and have been most thoroughly pleased with it. I use acetanilid, one drachm to the ounce of gall ointment. A. J. H.

Pediatrics.

A CASE OF ECTOCARDIA.

On a recent evening I was called by a midwife to assist her in an unusual presentation, which I gathered from her description to be transverse; but in the few minutes it took me to reach the house the child was "shot out."

After doing what was requisite for the mother I proceeded, with my friend Dr. George Barnardo, to examine the child, which we found to be about the eighth month with the heart external to the chest wall and beating vigorously; in other respects the infant seemed robust and promising.

The child was placed in an incubator, the heart being wrapped in lint kept moist with a saline solution. Prior to this the following observations were made:

1. There was no pericardium.

2. The heart occupied the same relative position outside as it would if normally situated.

3. The ventricles contracted so as to shorten the long axis of the heart, with a rotatory movement to the right, and bringing the right ventricle almost to the front.

4. Palpation and auscultation produced no change in the rhythm nor suggested sensation.

5. The sounds at the base were clear and distinct, no murmur being audible; auscultation at the apex was impracticable owing to the exaggerated movements.

6. The child cried; swallowed milk from a spoon; passed meconium, and seemed in every respect healthy.

Contrary to our expectation, it died at 5 a.m., having lived nearly six hours. It has been suggested that oil would have proved a better local application in the absence of pericardium, since death resulted from myocarditis.

The case is at present being fully investigated by Drs. Barnardo and Keith from an embryological standpoint.—CHAS. GRAHAM GRANT, in *British Medical Record*, December, 1896.

Erysipelas in Infants.

Dr. J. Lewis Smith advises for a child from one to two years old the internal use of four drops of the tincture of the chloride of iron every three hours, either alone or with one of the preparations of cinchona. He applies externally an ointment of ichthyol, a drachm to the ounce of cold cream. High temperature should be reduced by sponging, the wet pack, or the bath. Antipyretic drugs should be employed with caution, only in minimum doses and guarded by a heart stimulant. For delirium the temperature should be reduced. If the delirium does not abate, bromide of potash, chloral, or as a last resort opium, are to be given. In using carbolic acid care must be taken to guard against poisoning. The first evidence of poisoning is shown by the urine leaving a pink stain on the napkin after exposure to the air for half an hour.—*Pediatrics*, May 1st, 1896.

Muscular Macroglossia.

Dr. H. v. Ranke (*Jahrb f. Kinderheilkunde*, xli., No. 3, 1896) names three varieties of the above affection occurring in children: 1. That in which the enlargement of the tongue is caused chiefly by increase of interstitial tissues. There may or may not be atrophy of the ordinary tissue of the tongue. The number of blood-vessels or lymphatics may be much increased, forming tissue resembling an angioma or lymphangioma. 2. There may be an increase of the tongue due to hyperplasia of all the different tissues of the tongue. 3. There may be an increase of the special tissues of the tongue due to hyperplasia of the muscles which make up its structure. The condition generally occurs in conjunction with

other congenital deformities, such as abnormality of the intestine, of the arms, or of other parts of the body. It may be related to a general muscular hypertrophy or pseudo-hypertrophy. Cretinism or rachitis may be closely connected with the condition.

Infectious Vulvo-Vaginitis in Children.

Dr. Sheffield, in the *American Medical Bulletin*, May 30th 1896, summarizes his views upon this subject as follows: 1. Infectious vulvo-vaginitis in children is of gonorrhœal nature: the diplococcus present in the purulent discharge is invariably identical with that of Neisser, decolorizing by Gram's method. 2. The infection can be conveyed through common privies, baths, beds, clothing, etc. 3. The symptoms accompanying the disease are far less severe than those described in most text-books. 4. Most of the complications are preventable. 5. The value of boric acid or mild silver-nitrate solutions as prophylactics of purulent ophthalmia is very doubtful. 6. Silver-nitrate in strong solution is a reliable abortive of purulent ophthalmia, if used in the very earliest stage. 7. The mere presence of gonorrhœal discharge in a small girl, without injury to the genitalia, does not prove that rape has been attempted. 8. Physicians in charge of asylums or similar institutions should be on their guard not to admit girls with vaginal discharge, unless they can convince themselves that this is not of gonorrhœal origin. 9. The subject in question deserves a more careful study by the gynæcologist and pediatric physician, as well as by the general practitioner and medical jurist; and by their united observation we should in the near future be enabled to dispel any and all doubt as to the real nature of infectious vulvo-vaginitis in children. A. S. G.

The Operative Itch.

This is a peculiar form of pruritus which is apt to attack members of the medical profession only. The bacillus of this disease viewed under the microscope resembles a human hand: each finger, however, being a scalpel and the thumb a pair of scissors. I speak of it only as it occurs in the realm of nose, throat and ear diseases, although my confreres in other lines of practice will readily distinguish it as it occurs in their domain. Like all other forms of itch, it requires vigorous measures to thoroughly rid each special line of practice of this troublesome parasite.—*Clinical Chronicle.*

Public Health and Hygiene.

NEW LEGISLATION.

THE editors of this Department acknowledge with pleasure the courtesy of Dr. Bryce in furnishing them with an early copy of the regulations of the Provincial Board of Health respecting abattoirs and the inspection of milk supplies, which have just been approved of by the Government of Ontario:

Regulations adopted by the Provincial Board of Health, June 9th, 1896, under Chap. 53, 59 Vict., 1896, to provide for the inspection of meat and milk supplies of cities and towns.

1. Every municipal slaughter-house or abattoir, and cattle-yards and pens, shall consist of a building and yards similar in character and equipment to those set forth in Pamphlet No. 1, 1896, issued by the Provincial Board of Health: or, if otherwise, then such as shall be satisfactory to the said Board as being equally convenient, complete and spacious. Such shall consist of:

(*a*) Proper and adequate yards and pens with shelter for cattle and appliances and conveniences for feeding and watering the same.

(*b*) Killing floor.

(*c*) Refrigerator or store-room with separate hanging-room and ice chamber.

(*d*) Proper and adequate appliances for killing, cleaning and hanging of animals, for heating of water, for removal of blood and offal and for receiving the organs and fat.

(*e*) A supply of water of approved purity to be supplied from town or city supply, or from tanks attached to windmill or other mechanical appliance, assuring an adequate supply for flushing and general cleansing purposes.

(*f*) Sufficient and proper appliances for heating and ventilation.

(*g*) Properly constructed and adequate sewerage and means for disposal of sewage.

(*h*) Adequate arrangements for disposing of refuse and offal, so as not to create a nuisance.

2. The special inspection carried on by local Boards of Health as provided for by Section 4, Chap. 63, 59 Vict., shall consist of:

(*a*) A personal inspection by a veterinarian of every milch cow, kept for supplying public milk, for evidence of disease.

(*b*) An injection of tuberculin, supplied through the local Board of Health or Medical Health Officer, and obtained from a source approved of by the Provincial Board of Health, and supplied in a proper manner.*

(*c*) Each animal tested and found healthy shall be described and numbered by the veterinary inspector in a book supplied and prepared by the local Board of Health, which book shall be its property. A metal tag shall be affixed to the ear of the cow, with a number corresponding to that entered in the book describing said cow.

(*d*) Should an animal in any dairy herd be found to give the tuberculin re-action or be found otherwise seriously diseased, she shall at once be removed therefrom, and shall be dealt with by the veterinarian of the local Board after the methods hereinafter set forth.

(*e*) Until the healthy animals of any such herd shall have been proved to continue free from tuberculosis as proved by a subsequent test, examinations of such herds shall continue to be made within every three months. Thereafter a test of the herd shall be made not less often than once a year.

(*f*) No new animal shall be admitted to any dairy herd until it shall have been tested with tuberculin by the veterinary inspector of the local Board, and if found healthy shall be described and numbered in the manner already mentioned.

3. The cows found tuberculized or to re-act with tuberculin, are to be dealt with in some one or more of the several following ways:

(*a*) If wasting, and the clinical symptoms of lung disease are present, the cow shall be destroyed and the carcase dealt with so as to make it unfit for use as human food.

(*b*) If showing the re-action of tuberculin, while in fair condition, such cows shall be placed in stables or pens separated by an

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*Having had the forenoon and afternoon temperature taken to obtain an idea of the existing condition of the animal, a ten per cent. solution of normal tuberculin is injected to the amount of from one to four cubic centimetres according to the age of the animal, preferably in the evening. The temperature should thereafter be taken regularly, every three hours for a period of from twelve to fifteen hours, and carefully recorded.

Any notable rise of temperature after injection indicates the existence of tuberculosis in some one or more organs.

open air space from the healthy herd; and must not have access to the same yard, or the same food or water as the healthy animals.

(*c*) The preferable method will be to allow the milk supply in such cows to stop or dry up, and to fatten them as speedily as possible for slaughter; or the cow may be milked, and the milk thereafter be boiled for half an hour, and then fed to pigs or calves.

(*d*) A cow in calf may be kept, but the calf at birth must at once be removed from the cow and fed with the sterilized milk, if it be from a tuberculized cow. Such cows should, however, be fattened and killed while the disease is still slight and localized.

J. J. C.

CONSUMPTIVES IN HOSPITALS.

A LIVELY discussion was aroused in Boston, recently, by the proposal to establish in the suburbs of that city an institution for the shelter of poor consumptives. Among the people of the neighborhood there was almost as much excitement and opposition as if it were a question of putting a pest house in their midst for the reception of small-pox patients. Public apprehension was further aroused by the injudicious remarks of certain medical men, who were given the credit for such statements as that consumption is "as contagious as small-pox" and that "hospitals for consumptives are a source of danger to the whole community." With medical authority for such extravagant views it is no wonder that the people in general were needlessly alarmed and cast serious obstacles in the way of an enterprise that was really a perfectly proper and worthy charity.

When quarantine against consumptives was first agitated, it was pointed out by those who took conservative views that there was great danger of unnecessarily alarming the public, and causing the unfortunate victim of pulmonary tuberculosis to be shunned as if he carried the bell of the leper. Here is an instance that justifies the warning, and there will be many like it unless pains be taken to correct the extravagant view of the contagiousness of consumption which the public is fast acquiring, as the result of the teachings of the medical profession.

That consumption is a communicable disease is well nigh universally admitted by medical men, and should be generally

understood by the public, but with this knowledge should go the further understanding that the danger of contagion is but slight, and may be absolutely controlled with ease, that is, by caring for the sputum in pulmonary cases and for the alvine discharges in the intestinal form of the disease. But experience proves that it is much easier to arouse public apprehension of danger than it is to control it when once aroused. Like a prairie fire, it is easily kindled, and under ordinary circumstances may be kept within bounds, but let it once get beyond a certain limit and there is no restraining it.

It is not, then, surprising that not only should people fear the neighborhood of sanitaria devoted to the treatment of consumption, but that hotel keepers, whose pockets quickly feel any suspicion about their houses, should sometimes decline to receive guests whose appearance and actions suggested that they were suffering from consumption. The aggravating feature of the people's attitude, however, is that while it is active enough in directions where the danger is less, it does nothing to suppress the sources of greatest danger. The properly instructed consumptive in a sanitarium or hotel who is careful about the disposal of his sputum is no menace to the public safety, but against him outcry is made, while the army of spitters in public places is allowed to practise its disgusting and dangerous habit unchecked. Much is said of the danger of infection from tuberculosis by travelling in sleeping cars on lines frequented by consumptives. The risk is a perfectly manageable one by the passage of laws against spitting in public places except into proper receptacles. These laws would do good, not so much by their direct restraining power through the penalties proposed as through their educating influence upon the public, arousing them to an understanding that spitting is objectionable, not only because it is a filthy habit, but because it is likely to be the means of disseminating tuberculosis.

Experience as well as theory teaches the importance of controlling the expectoration of the consumptive. The two largest sanitaria for consumptives in the world are at Görbersdorf in Silesia and at Falkenstein in Prussia. Statistics show clearly that since the establishment of these sanitaria the number of cases of consumption among the neighboring inhabitants has decidedly diminished. The rules for the disinfection of sputum are particularly strict in these institutions and are so carefully enforced as to reduce the danger from this source to a minimum. On the other

hand pulmonary consumption is on the increase on the southern coast of France in the neighborhood of Nice and Mentone, whither the climate has attracted an ever increasing number of patients with lung disease who live in hotels and boarding houses, with no instructions as to their hygienic rules except such as may be imposed by physicians in attendance who cannot be expected to see to it that advice as to the disinfection of sputum is followed out.

Admitting the communicability of consumption should lead to every precaution against the spread of the disease, the knowledge of the source of contagion is so certain, and that source is one so easily kept under control, that it cannot be necessary to institute harsh restrictive measures against this class of patients, or to withhold from them the advantages of admission under proper restrictions to hotels, hospitals or other places that are open to the public.—Editorial, *Northwestern Lancet.*

Sand Filtration of the Water Supply of Philadelphia.

At a meeting of Councils' Finance Committee, October 8th, the special sub-committee appointed to consider the bill providing for the creation of a loan of $3,000,000 for the purpose of erecting a plant or plants for the filtration of the city's water supply, presented a favorable report. After a short discussion, a resolution was adopted requesting the chairman to introduce in Councils an ordinance authorizing the Mayor to negotiate a loan of $3,000,000 for the erection of one or more filtration plants.

Craig Colony for Epileptics.

Since the opening of the Craig Colony for Epilepties, in New York, in February last, one hundred and forty-nine patients have been received; and observations to the present time tend to the conclusion that the enterprise will be a success as to both the patients' improvement and its patronage. The production of the colony's farm during the first nine months was about one-half of their total cost of maintenance. All the mechanical work of the colony is now done by artisans among the epileptics. Substantial modern buildings have been constructed by the corporation, and the managers will this year ask the Legislature of New York for an appropriation to construct a dormitory for three hundred more patients. E. H. A.

Pathology.

OBSERVATIONS UPON THE RELATION BETWEEN LEUKÆMIA AND PSEUDO-LEUKÆMIA.

BY C. .F MARTIN, B.A., M.D.,

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AND

G. H MATHEWSON, B.A., M.D.

THERE are few chapters in the domain of clinical medicine which have excited the interest of modern observers more than the diagnostic value of a blood examination. That it is an undoubted aid in the diagnosis of many diseases cannot but be acknowledged by all who have had any experience with these methods. But although they have been so extensively employed within recent years, there can be no question that hitherto the results have not fulfilled our expectations. In the light of the most recent observations it may be said with more than probability that there is no disease known other than those due to parasites, which, *per se*, can be diagnosticated by an examination of the blood. Although a certain general law may apply to the conditions of the blood found in the various forms of anæmia, for example, such a law nevertheless is far from being absolute. Many of the secondary anæmias not infrequently show a blood condition which is indistinguishable from that of the progressive pernicious anæmia: and, apart from other clinical observations, it is absolutely impossible to make a satisfactory diagnosis. We have time and again observed in patients who were apparently suffering from grave chlorosis, an enumeration of blood cells corresponding to that usually found in pernicious anæmia: and the same may be said of not a few instances where tuberculosis and malignant disease have afforded similar observations. During the past year, also, in a patient suffering from anorexia nervosa, the blood examination revealed 900,000 red cells, about twenty per cent. of hæmoglobin, nucleated red cells of various sizes, and otherwise a condition which, from the stained specimen, showed all the characteristic features of the blood of pernicious anæmia.

From the work, too, that has been published in the last few years the diagnosis of such a disease even as leukæmia cannot be

established from a mere examination of the blood constituents. As has been shown by a number of recent observers, sarcomatous growths may undoubtedly induce a cellular ratio in the blood which is indistinguishable from that present in a typical true leukæmia. And hence, from our present knowledge, it would seem practically impossible to diagnosticate definitely a leukæmic condition, apart from the numerous concomitant symptoms, objective and subjective.

Having ourselves met in the past few years with not a few cases where an absolute diagnosis of leukæmia or of pseudo-leukæmia was rendered extremely difficult, it has seemed to us worth while to note this fact, and to mention briefly some instances which show how closely related these two conditions really are. That the relation between the two is in itself nothing new we are quite aware, but inasmuch as the matter has only been referred to in connection with isolated cases, and inasmuch, too, as the subject has apparently received far less attention than it deserves, we have taken upon ourselves to emphasize it the more.

Previous to careful and systematic examination of the blood the French writers, under the term "adénie," or "diathèse lymphogène," grouped together all those diseases which appeared to involve mainly multiple lymphatic glandular structures: hence they included leukæmia and pseudo-leukæmia under the same head. And it was not until some years later that an examination of the blood revealed occasional differences which permitted of a subdivision into various forms of lymphogenous diathesis, and of a separation of the two diseases above mentioned. Since that time it has been the practice of physicians to describe under different headings these two closely allied diseases, and yet within the past few years case after case has been recorded to show that such a separation is scarcely justifiable.

If we compare, for example, the morbid anatomy of the two affections, we observe to all intents and purposes identical conditions: we may get in both the same lymphoid overgrowths in the organs and in the tissues, not only where lymphoid elements previously existed, but elsewhere as well, and, above all, in the bone marrow. Within the last year, however, Askanazy,[1] writing in *Virchow's Archiv*, and following the views of Neumann,[2] who regarded leukæmia as a disease primarily of the bone marrow, has asserted that the morbid anatomy of the two diseases has one great distinctive feature: that in leukæmia the marrow throughout is diffusely affected, while in pseudo-leukæmia the changes are

always localized, manifesting perhaps multiple lymphomata, but never a diffuse lymphoid or pyoid condition. From the number of cases on record, however, proving the contrary the distinction would scarcely seem justifiable: while Askanazy's explanation of the absence of bone-marrow changes in some cases of true leukæmia are scarcely forcible enough to render the theory unimpregnable or to convince other authorities on this subject.

Nor can one distinguish between the forms of multiple glandular enlargements or the varieties of splenic tumors, the macroscopic and microscopic lesions are throughout interchangeable: in both one may have a like tendency to infiltration of cells: and in both the true and the so-called false disease metastases may occur in almost any part of the body. Recent observations have in this respect borne out the older theories of those who recognized between the two conditions no distinctive morbid anatomy.

There is no more satisfactory proof necessary to bear out the theory of this close relationship than is obtained in a casual perusal of the literature of the past decade, dealing with some cases of leukæmia, for it sufficiently illustrates the many difficulties one meets with in endeavoring to differentiate between cases of true leukæmia and of Hodgkin's disease. Almost every year within that period one or more cases are recorded, showing with what hesitation the observer is inclined to make any absolute distinction. If distinction there be, it is universally recognized to be a clinical consideration only, for from the morbid anatomy alone we can obtain no satisfactory differentiation other than the presence of increased leucocytes within the blood vessels. Even this, from the point of view of pathological diagnosis, is not free from objection, inasmuch as we may be at a loss to decide whether or not such a condition has been a terminal process, as so commonly occurs. The leucocytosis itself is a purely clinical observation, and it is mainly upon this feature that any question of differential diagnosis rests.

Concerning the clinical picture of the two maladies, we find in each an identical classification into types: in both a chronic form is described and in both a more acute, characterized often by the presence of irregular fever, early enlargement of glands, and onset of hæmorrhages and a rapidly progressive lethal termination. Such is Ebstein's case of acute Hodgkin's disease, in which, except for the condition of the blood, all the essential features of the case were identical with those of an acute leukæmia. Such, too, appears to be the reason why authors occasionally speak of a lymphatic

Hodgkin's disease where a lymphocytic leucocytosis occurs of too moderate a degree to warrant the application of the term leukæmia.

In the more chronic forms of these two diseases there is often a different mode of onset of the lymphoid enlargements, inasmuch as in Hodgkin's disease it is the glands, while in leukæmia it is the spleen that is first affected. Yet such a distinction is far from being absolute. Cases of Hodgkin's disease have been observed in which the spleen alone has been affected, while other lymphoid structures remained quite normal, and we have seen one such case at the hospital here in which, from general physical conditions, as well as from examination of the blood, it was impossible to make any other diagnosis than that of a splenic form of Hodgkin's disease.

Whether or not we are justified in considering the two diseases as distinct from any other clinical conditions apart from the blood examination we are unable to say. Eichhorst[4] suggests that an essential difference between the two diseases may be observed in the urine: that in leukæmia there is an excess of uric acid, while in Hodgkin's disease he has never been able to observe any such condition. Considering, however, the frequency with which diseased blood conditions are attended with superabundance of uric acid in the urine, it would seem that an altered metabolism which induces the leucocytosis might likewise explain the presence of excessive uric acid in the urine, and that the condition may be associated in some way with the altered blood condition. That such a process does indeed occur has been proved experimentally by Kühnau[5] who has shown that an excessive leucocytosis is invariably associated with an increased production of uric acid. In this case, then, such a differentiation as suggested by Eichhorst would have quite as little satisfactory foundation as has the basis of differentiation by means of an examination of the blood.

It may very reasonably be questioned whether such a variable symptom as the incidence of leucocytosis should, *per se*, form a basis for the classification, or whether from our present knowledge we are not laying too much stress upon this one condition.—*British Medical Journal*, from the Medical Clinic of the Royal Victoria Hospital, Montreal.

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W. H. P.

(To be continued.)

Proceedings of Societies.

TORONTO MEDICAL SOCIETY.

The regular meeting was held December 10th, in the Council buildings. President W. J. Wilson in the chair.

The paper of the evening was read by Chas. G. Stockton, Buffalo, on "Some Aspects of Enteroptosis."

The paper opened with a study of the body cavities in respect to the motility or non-motility of their contents. It was pointed out that the abdominal contents were markedly motile. Visceral displacements were much more common than generally supposed. In 1,310 cases examined there were 148 cases of enteroptosis. Most cases occurred in women, and were caused by improper dress. It was most often seen in those with poor musculation and imperfect development of the trunk. The essayist spoke first of enteroptosis of the colon, and of how this led to unusual fæcal accumulations and intestinal stasis, with auto-intoxication. He pointed out farther how this condition was often accompanied by movable kidney. Some observers held that this latter condition was brought about by a loss of balance between the liver above and the intestines below, and that the perinephritic fat had little to do with the matter. Enteroptosis was also associated with flaccidity of the abdominal walls. Some of his cases had presented symptoms of transient hydronephrosis: others obstruction of the bowel; and others of gastric crisis—pain, vomiting, etc. One case had died in one of these crises. The patient often described the sensation as that of a dumb-bell in the side. The cause had been described as due to a kink in the ureter: by others to a temporary congestion of the kidney, which would explain the transient albuminuria. In one class of cases neurasthenia was a marked feature. In one case referred to there was constipation, food stagnation, abdominal neuralgia, chlorosis, headache, insomnia, great irritability, and inability to engage in mental or physical activity. For the patient's relief one ovary was removed, the rectum underwent surgical treatment, lavage and internal faradization were tried, careful attention was given to drugging, the eyes were attended to —all without any real improvement. Finally, after eight years, nephrorraphy was done and the woman was restored to health.

Professor Stockton then discussed the effect of enteroptosis on (1) the digestion, and (2) on the blood.

In the vast majority dyspepsia was present to a greater or less extent. This class did not include the so-called nervous dyspeptics. In a certain class of dyspeptics the cause of the condition could not be explained in any other way than by enteroptosis. Such patients were slender, possessed long, narrow chests: the upper part of the abdomen was hollowed, while the lower part bulged. Abdominal pulsation is to be seen, sometimes leading to the diagnosis of abdominal aneurism. There is lateral expansion of the abdomen when the patient lies flat on the back. (Diagrams were shown by the essayist illustrating this condition.) Gastric splashing is easily produced. The transverse colon may be felt over the aorta, in the region of the umbilicus, 6–10 cm. on either side of the median line. Boaz holds that this is the pancreas instead of the colon. It was a point of uncertainty with the speaker. Tenderness over the solar plexus and along the spine was another symptom noted. Constipation, flatulency, epigastric weight and distension (worse after eating), nausea and attacks of pain and vomiting, enlarged liver, disagreeable taste in the mouth, offensive breath often—what the old text-books described as symptoms of indigestion were present. The complexion is muddy and sometimes pigmented. Added to these were symptoms of auto-intoxication—headache and cerebral discomfort. Examination of stomach contents showed free hydrochloric acid present, combined chlorides abundant, and fatty acids. The aspiration tube must be passed in twenty-four, sometimes twenty-eight inches. The stomach may not be large. A diagnosis of dilatation is often made. The essayist confessed treating a good many cases for dilatation before it dawned upon him he was on the wrong track. Patients did badly on farinaceous and leguminous foods. Albuminoids and a large quantity of water did most satisfactorily. A morning saline draft acted well as an aperient. This was sometimes inefficient, and required to be supplemented by flushing the colon. Most of the cases were improved by lavage, electricity, and good diet.

Dr. Stockton next discussed the relation of enteroptosis to chlorosis. In many cases of chlorosis displacements of the viscera could be made out. The anæmia had been accounted for by the descent of the stomach and pressure on the solar plexus. The essayist quoted reports made by various authorities in regard to this relationship. Some patients with enteroptosis complained of

no special discomfort, yet they were below the normal standard of health. Examination of the blood showed a decrease in hæmoglobin. The question which condition is precedent was a debatable one. He (the speaker) was inclined to think the visceral sagging occurred first and that the auto-intoxication gave rise to the anæmia. Sir Andrew Clark had drawn attention to the effects of stercoraceous poisoning before a study of enteroptosis had been emphasized. In addition to the usual modes of treatment of chlorosis with displacement of one or more of the abdominal viscera, what more could be done? What measures were at our command for restoration of the organs to their proper position? The abdomen should be supported with pads and bandages, corsets being removed. This would provide comfort in a great majority of cases. Several patients of the Professor's had worn supports which exerted pressure over the lower part of the abdomen, held in place by perineal bands. He had never known a patient to lay aside one of these bands voluntarily. Incidentally the speaker said that if he were returning to obstetric practice again he would return to the use of the binder, which he had discarded. Salines in the morning, with injections, were of value to overcome the constipation. In addition to these measures there should be the practice of suitable gymnastics and Swedish movements. They were of great use. These manipulations served to restore the organs in place, and tended to fix them there—by improved innervation and nutrition of the viscera. Trunk rotations and flexions served to strengthen the abdominal muscles and improve abdominal blood supply. The medical man should see that the masseur employed understands his work and possesses a proper knowledge of anatomy and physiology. Unless he did he would do more harm than good. One observer claimed to be able to replace and fix floating kidney. The essayist discussed the various operative proceedings used to retain displaced viscera. He then described a severe case in which nephrorraphy effected a cure. In all aggravated cases he would advise this operation. It would be followed by some benefit, if not by complete relief.

Dr. Oldright was glad Dr. Stockton had emphasized the importance of hygienic measures as a preventive of enteroptosis. He referred to cases in which severe dyspeptic conditions were present with a secondary chlorotic condition where he had suspected movable kidney had a great deal to do with it. He did not think all cases depended upon enteroptosis. The paper had encouraged him and

would strengthen his hands in the recommendation of fixation of the kidneys, a recommendation he had formerly made in a half-hearted manner.

Dr. Oakley asked that the reader of the paper should say a little more in regard to the diagnosis of floating kidney.

Dr. J. F. W. Ross said that the condition of enteroptosis was often due to rupture of the abdominal walls. In many cases of abdominal section he had noted the stomach below the umbilicus. As to the operation of nephrorraphy, he had given it up. Another cause for this condition was abdominal adhesions. The speaker then referred to various visceral displacements and the surgical means which had been used to correct them.

Dr. A. McPhedran said he was in accord with the essayist as to the frequency of this condition. While enteroptosis was a potent factor in the production of digestive disturbances and general neurasthenic conditions, yet it was also more frequently a result than a cause. In common with other parts of the body, the supports of the stomach and intestines would suffer relaxation. The chlorotic condition was generally unassociated with marked enteroptosis in his experience. He had searched for displacements but had found none. Besides, recovery was complete and permanent. The speaker laid stress on the importance of training the trunk and abdominal muscles, as well as those of the limbs, in girls especially. Those cases in which he had recommended the fixation of the kidney had not done well, and he was not able to recommend it with the utmost confidence.

Dr. W. J. Wilson asked what effect bandaging after pregnancy and early corsetting of girls had in producing the condition. He had observed in the latter class of cases flattening of the abdomen above and bulging below.

Dr. John Hunter facetiously remarked that the suburban doctor, into whose hands patients fell on removal to the suburbs fresh from the leading down-town men who had given them various prescriptions for dyspepsia, would now be able to diagnose their case by telling them that their "in'ards" were displaced.

Dr. T. F. McMahon detailed the history of cases illustrating the occurrence of gastric crises where floating kidney was present. Some cases of renal colic were very puzzling. If enteroptosis were the cause of chlorosis, why should it be found generally between the ages of fifteen and twenty-five and not later in life?

Dr. G. H. Carveth suggested that one cause of enteroptosis was

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referable to the bed which allowed the mid-body to sag, and tended to congestion of the abdominal and pelvic viscera.

Dr. H. T. Machell said it was hard to see how stitching up the kidney would relieve the various nervous disturbances caused by sinking of the stomach and colon.

Dr. Oldright thought there were many cases of floating kidney which did no harm, while others were connected with disturbances of the nervous system.

Dr. Stockton replied. He referred to the work of dress reform he had been interested in among the children of his city. Correct posture among school children should be insisted upon. As to why chlorosis did not occur in later life he did not know. Neither was he able to explain, he said, how fixation of the kidney relieved the neurotic and stomachic disturbances.

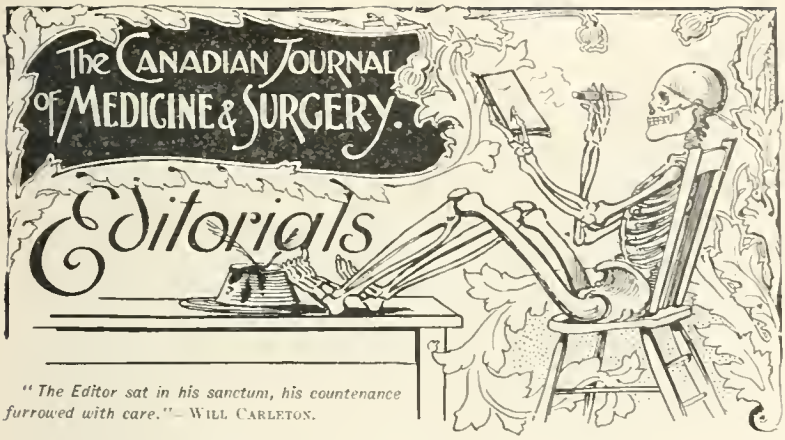
A cordial vote of thanks was tendered to the doctor.

The Society then adjourned.

JOHN N. E. BROWN, *Sec'y.*

Sanitation in Calcutta,

According to a recent Indian daily paper, is in a very bad way. Among the items of the indictment, we are told that the defective condition of the sewers has reduced the subsoil to a condition little better than a trenching ground: that the scavenging of the streets is a public scandal: that refuse, which ought to be removed before dawn, is frequently left lying about, fermenting and poisoning the air throughout the heat of the day: that the water supply is defective, and that the death rate is abnormal during the hot weather. The cause to which this disquieting state of affairs is ascribed is an old and familiar one, namely, the preponderance of native members on the municipality. The remedy propounded is drastic. "The feeling is growing stronger that the sanitation of Calcutta cannot be left indefinitely to be the plaything of gentlemen like Babus Norindro, Nath Sen and Surendranath Banerjee, and whether the reform be made from within by the expedient of nominating more Europeans, or from the outside by the more drastic measure of abolishing an elective municipality altogether and substituting some other administrative authority, a change must not be much longer delayed." Evidently some people would like to make things lively for Babus Norindro, Nath Sen and Surendranath Banerjee.—*Sanitarian.*



"The Editor sat in his sanctum, his countenance furrowed with care."— WILL CARLETON.

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OUR ANNOUNCEMENT.

THE CANADIAN JOURNAL OF MEDICINE AND SURGERY, of which the present is the first number, will in future appear about the first of every month, and the annual subscription is to be one dollar, single numbers ten cents.

The editors intend to devote their energies to the task of

bringing out a helpful and, withal, bright and readable monthly—a digest of some of the best articles in foreign medical journals, and an open field for the original articles of Canadian physicians.

A special effort will be made to report the work done in the clinics of the Toronto hospitals and also such other clinics as may be available. Items of interest and articles bearing on the work of the biological laboratory of the Provincial University will also be an occasional feature. The medical societies of Toronto and many others throughout the Province will be regularly reported. The quarterly reports of the Provincial Board of Health, and papers of interest to the profession written by members of that Board, will also appear.

The various departments will be placed in charge of the following gentlemen:

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The Canadian profession are also cordially invited to use our pages for discussing matters of interest to physicians, and to consider the Journal as their property to that extent.

We propose to carry on the Journal in accordance with the ethical principles which characterize the proceedings of reputable physicians. We hope to live in harmony with our confreres of the Canadian medical press, and shall work to gain their esteem and the good opinion of our foreign exchanges. As deeds and not words count in the battle of life, we shall be willing to be judged by our record, hoping, however, that any shortcomings which may appear in this number may be credited to a first appearance.

J. J. C

MODERN CLINICAL MEDICINE.

Bishop Butler has well said that "Next to knowing the truth itself, is to know the direction in which it lies." In clinical medicine, in addition to that skill, which can only be obtained by observation and practice, valuable instrumental aids to diagnosis have been multiplied of late years; but these generally come into employment when the observer has defined the seat at which he will probably find disease. Assuming that the necessary preliminary observation has been made, it must be admitted, however, that in certain well-defined plagues of modern life, such as diphtheria, phthisis and enteric fever, the bacteriologist has given to the clinician more than aids to diagnosis, in fact positive data, which illumine the obscure and give precision to the vague, thereby enabling him to apply the resources of his art at an earlier stage than was formerly possible. In this connection, it may not be unprofitable to hear what a pupil of the great Trousseau has to say on the present status of modern clinical medicine. Professor G. Dieulafoy, who succeeds Germain Sée in the chair of Clinical Medicine at the Hotel Dieu, Paris, in his opening address, which was delivered last November, shows that clinical medicine is no longer the same as it was a few years ago, that it is modified, and has been very considerably enriched, more particularly by bacteriological discoveries. He does not admit that modern experimental medicine is going to sap the foundations of her older rival, observant medicine. He does not believe that experiments on animals should replace the study of the patient, or that the medical student should pass his days of pupilage in a laboratory, instead of frequenting an hospital. He does show, however, that bacteriology is of signal service to clinical medicine.

Witness the demonstration of pulmonary consumption in a case in which, from a study of the signs and symptoms, a clinician would have felt justified in diagnosing simple bronchitis and therefore expressing a favorable prognosis. Or the still more glaring example of a physician diagnosing a case as one of follicular tonsillitis, when a bacteriological examination of the secretion, taken from the tonsil, shows that it is really one of diphtheria. Professor Dieulafoy justly says, "Clinical observation alone is unable to say if a sore throat is diphtheria or not; a bacteriological examination

can make us sure of the diagnosis." Again, take the recent triumphant success of Widal's clump-reaction of serum on the blood of a patient, enabling the physician at an early stage of the disease to diagnose typhoid fever from la grippe or tubercular meningitis.

These examples, however, do not, in Professor Dieulafoy's opinion, diminish in any way the importance and prestige of clinical medicine; on the contrary, they should induce us to indulge the hope that, owing to continual improvements, clinical medicine will, little by little, attain the precision of an exact science. Laennec, in his day, helped to bring about this hoped-for consummation and vastly improved clinical medicine by the invention of auscultation. Every physician practises clinical medicine whenever he examines blood, urine or humors or employs the thermometer, the microscope, the ophthalmoscope, the laryngoscope and other means of verification and analysis. And when to make sure of a diagnosis he has recourse to bacteriology and experimental work, he is still practising clinical medicine.

Clinical medicine draws its sustenance, through many roots, in numberless fields: all methods of investigation increase its patrimony: its domain enlarges every day. It would not, therefore, be correct to say that there is an ancient as well as a modern medicine. Medicine is just like other sciences: it follows its own evolution and marches along with progress.

But diagnosis is only one of the aspects of clinical medicine. In treating a case of severe disease, the question of prognosis is constantly before the physician's mind, and the family and friends of the patient keep continually questioning him on the gravity of the disease, its duration and probable issue. To quote the professor, "You have a man's life in your hands: on what will you base your therapeutics: in what direction will your plan of action tend? If you lack the experience, which can only be acquired by the frequentation and assiduous and incessant observation of patients: if you are not quick to notice the changes, which may arise at any moment: if you are not clever at making out the oftentimes delicate gradations of color, which announce an approaching disease or foretell a storm: if you are not ready at the proper signal to act energetically: if you do not know how to economize the energies of your patient: if, with the hope of doing good, you overshoot the mark: if you exhaust the kidney you intended to strengthen: if you weaken the heart when you meant

just to enliven its function: in a word, if your medical education does not permit you to feel in yourself 'that interior feeling' which is like the self-felt testimony of a properly done medical duty, it is to no purpose that you are a chemist, a physiologist, a bacteriologist—you are not a physician."

Eloquent words, indeed, and true as well! Fortunate is the physician who, early in his professional career, familiarizes himself with the work of the laboratory and accustoms himself to the use of instruments of precision, ever striving to give to his diagnosis the certainty of true science. More fortunate still, if his years and clinical experience grow in harmony. Always obedient to the advances of the laboratory, always clever, painstaking and observant of his patient, striving to steer him into the safe harbor of a happy prognosis, or, at the last scene of all, ease his passage and bring him euthanasia. J. J. C.

THE SERUM DIAGNOSIS OF TYPHOID FEVER.

Any means which will enable a practitioner to arrive at a diagnosis in suspected typhoid fever will be heartily welcomed, and by none more than the older members of the profession. According to the theories of Pfeiffer and Widal, who made the discovery of the influence of the typhoid bacillus upon the blood of the patient, a tolerably accurate diagnosis of typhoid fever is possible within two days from the invasion of the symptoms. Dr. Wyatt Johnston, bacteriologist of the Quebec Board of Health, has given his experience with this diagnostic test in a recent number of the *British Medical Journal*. He says: "When a drop of sterilized water is added to a drop of dried typhoid blood a solution is obtained in a minute or two, which is mixed with a drop of actively motile typhoid culture, preferably not over twenty-four hours old. Examined microscopically the motion rapidly stops, and bacilli run together into loose coils or clumps. This takes place usually in a few minutes, but sometimes may require three or four hours, or even twenty-four hours."

It appears that a gratuitous public service of serum diagnosis was introduced, last September, by the Board of Health of the Province of Quebec. Suitable outfits for taking samples, consisting of pieces of sterilized paper, enclosed in envelopes, with printed directions and blank spaces for information to be filled in, have been placed at the chemists' shops, which already keep and supply

outfits for diphtheria diagnosis. In case a negative result is obtained and the suspicions continue, a small sterilized bottle containing a sterilized curette, is sent, in a mailing case. This curette can be used to obtain a small quantity of faeces, or the bottle to hold fluid blood.

Heating the paper, by holding it over a lamp, will sterilize it in a few minutes. In case malaria is suspected, the sending of a thin film of blood dried on glass, as an additional sample, would permit of this being examined for the plasmodium.

Dr. Johnston reports a percentage of 99.4 per cent. of satisfactory or decisive results from his experiments. He shows that this method of diagnosis is also applicable to cholera, in which disease Achard and Bensaude have recently shown that the reaction may be present even as early as the first day. Dr. Johnston's conclusions are as follows:

1. The use of dry blood serum diagnosis has given us what appeared to be satisfactory results for diagnostic work.

2. An incomplete reaction was occasionally obtained as early as the end of the second day.

3. The complete reaction was rarely delayed beyond the fifth day.

4. Typhoid blood, allowed to dry for sixty days, still gave the typical reaction. This might permit its application to medico-legal work.

5. In experimental cholera immunity, a typical reaction was obtained with dried blood.

6. The reaction may appear after a single dose of typhoid or cholera culture.

7. There is a possibility that the clumping of the typhoid bacilli may be utilized as a means of isolating them from cultures made from water, faeces, etc.

J. J. Mackenzie, B.A., bacteriologist of the Ontario Board of Health, who has also had a large experience with this test, is prepared to assist the profession in arriving at a correct diagnosis in suspected cases of typhoid fever. He recommends that a large drop of the patient's blood, taken from the ear or finger, be allowed to dry on a piece of sterilized non-absorbent paper and forwarded to him at the Biological Department, Toronto University. A report can be obtained in twenty-four hours by telegram, showing whether the experiment confirms or disproves the suspicion of typhoid fever.

THE INSPECTION OF MEAT AND MILK.

UNDER the department of Public Health and Hygiene, we publish the Regulations of the Provincial Board of Health relating to the construction, equipment and control of municipal abattoirs and the methods to be established for the inspection of dairy cattle supplying public milk to cities and towns. These regulations are founded on the terms of an Act passed at the last session of the Legislature for the inspection of meat and milk supplies. The public and their representatives, the Boards of Health and their medical officers are becoming very sensitive as to the quality of the meat and milk they are to consume, and have learned that not only are dangers of disease from such sources possible, but that the persons who supply these articles of food are neither well versed in the distinctions between what is wholesome and the reverse, nor anxious to investigate too closely their own supplies, though perhaps critical regarding those of others.

The Act of 1896 provides that a municipal council in a city or town may establish an abattoir, but when so established it shall be constructed, equipped and regulated in conformity with the regulations of the Provincial Board of Health. There are both sanitary and commercial reasons for this. A town might, for instance, be careful to inspect meat intended for local consumption very carefully, but might be content to allow slaughterers to ship indifferent meat products to outside markets. Farther, interested butchers might get control of such abattoirs and conduct them in such a way as to suit themselves, rather than the convenience of the public.

But the great and special benefits to be looked for are that the regulations establish a systematic means of protecting the public while informing both them and the producer, whether butcher or farmer, that it is quite possible, and likewise profitable, to study the prevention of animal diseases, and again, that if Canada is to keep pace with other countries in the competition for the food markets of the world, she must apply to the study and suppression of animal diseases the same systematic methods which have proved so successful during the past fifteen years in other countries.

The testing of dairy cows and the licensing of dairymen whose herds are free from tuberculosis, have now passed the point of discussion and have become, in several American cities, routine procedures. For instance, a by-law of Minneapolis contains the

following words: "It shall be the duty of the Commissioner of Health to cause to be made by the veterinarian of the Department of Health, or under his direction and supervision, an examination of each and every animal producing milk for sale or consumption in the said city and belonging to or controlled by said applicant or the person from whom said applicant obtains his milk, for the purpose of detecting the presence or absence of tuberculosis or any other contagious or infectious disease: and the said veterinarian of the Department of Health, in making such inspection and examination, is hereby authorized to use what is commonly known as the 'tuberculin' test, as a diagnostic agent for the detection of tuberculosis in such an animal:" and upon freedom from such disease the license is granted. When it is considered that the milk supplies of Toronto are obtained from probably not less than 7,000 cows, it is plain that the work of inspection, to be systematized and effective, will at first require some labor and expense. The Act provides, however, that the Board of Health may fix the price for inspection and charge so much per animal inspected. This method will serve the desired end of encouraging honest and business-like dairymen in their efforts to keep good cows, since a license from the Health Office becomes a guarantee of the soundness of his products. We hope that a decided advance will be made by our city and town medical officers in establishing such inspections, as are provided for under the Act, during the coming year.

THE JENNER MEMORIAL.

THE form of a memorial to Dr. Jenner, the world-renowned physician who discovered the effects of vaccination, is being discussed in the correspondence columns of the *British Medical Journal*. One physician makes the following suggestion: "Let the Jubilee year of Her Majesty be commemorated in this country by the passing of an Act of Parliament enforcing vaccination (primary and secondary), and supplying every opportunity for the obtaining of efficient, reliable vaccine. No greater, nobler or more lasting memorial could be raised." We heartily endorse what Dr. Murray Bradwood (Amersham, Bucks, Eng.) has said in this connection, and have no doubt that the matter will be promptly taken up and pushed through to a successful issue, thereby placing England in this respect as far forward as any other advanced nation.

SIXTY-FIFTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, MONTREAL, AUGUST, 1897.

THE *British Medical Journal* of December 5th gives quite a long article on the approaching meeting of the British Medical Association in Montreal next August. The article is well illustrated with views of McGill Medical College, Royal Victoria Hospital, Laval University, and the buildings of the Medical Faculty of McGill College, all of which will have a most fruitful tendency and instil into the minds of the medical profession all over Great Britain that they are not meeting in a small and insignificant town partially inhabited by Indians and covered nine months of the year with several feet of snow, with a temperature away below zero: but, on the contrary, will prove to them that the Association is going to meet in one of the most cultured cities on the continent of America. The article goes into every detail, giving the history of the original formation, by Mr. Ernest Hart, in 1892, of branches of the British Medical Association throughout the colonies, when that gentleman, who left behind him many friends, took a tour to India and then across the Pacific to Canada, on his way addressing meetings at Vancouver, Winnipeg, Toronto and Montreal. Sir William Hingston (then Dr. Hingston) at that time bore "the burden and heat of the day" in bringing to a successful issue the formation of the Association in Montreal, and he well deserves the honor bestowed upon him in being made president of the Reception Committee, which entails less active work than would have devolved upon him in being made President-elect, a position he had to resign at the time of his appointment as Senator in the Dominion Parliament.

The article goes on to give a detailed description of the city of Montreal, McGill University Medical School and the Montreal hospitals, and also describes the buildings in which the various meetings will be held.

We sincerely hope that the meeting of this, the largest and most influential medical association in the world, will be a huge success, and we think that we may safely say that if the same depends upon the support which will be given to it by the profession all over Canada, its success is already assured. W. A. Y.

APENTA.

Physicians are occasionally consulted as to the advisability of using natural aperient waters, and people with or without the advice of their medical advisors are often ready to use them to relieve chronic constipation, etc.

The main objection to these waters is that the dose is not constant, the effect in one instance being as great from the use of a wineglassful as would be in another instance from a tumblerful of the same water, and analysis also shows that in the process of bottling these waters, injurious organic substances are occasionally added.

Apenta, a new natural aperient water from the springs at Ofen, in Hungary, is put up under the control of the Royal Hungarian Chemical State Institute, which should be a guarantee of its freedom from injurious extraneous matters as well as its constancy. The analysis published by Professor Liebermann shows that the proportion of sulphate of soda to sulphate of magnesia is gram 15.432—24.4968 in the litre, so that this aperient water may be classed as one of the strongest in the market.

THE MEDICAL PROFESSION IN FRANCE.

We are all more or less dissatisfied with the state of things in the medical commonwealth in these realms: it is interesting, therefore, if not particularly comforting, to note that our brethren in some foreign countries are even as we are in this respect. There is France, for instance, where it is sometimes said the profession occupies a more fortunate position. If we are to believe a distinguished journalist—M. Hugues Le Roux—we have no reason to envy our French confreres. M. Le Roux has recently discussed in the *Figaro* the question, Shall our sons be doctors? He answers it, implicitly, with an emphatic negative. In the first place it is not easy to become a doctor. M. Le Roux estimates that, reckoning in the expenses of preliminary education, it costs something like £1,600 to get the diploma. Then comes a weary period of waiting for patients, entailing further expense. If a practitioner starts in a country district he has to face the competition of the local "vet.," the cure, the bonesetter, and the blacksmith; and he is called in

only in hopeless cases, so that, with a confusion between cause and effect natural to the untutored mind, he comes to be looked upon with suspicion as a kind of Angel of Death. In towns there are the hospitals, which not only give indiscriminate relief to the working class, but take paying patients at charges varying from 2 to 12 francs a day: in these receipts the medical staff has no share. Then there are the clubs, which can always get doctors to serve them at 2½d. a visit. There is also the competition of unqualified practitioners. In spite of the law—on paper—against the unlicensed practice of medicine, Paris swarms with herbalists and "curers" of all kinds, and the vilest quacks advertise their wares in the newspapers without let or hindrance. M. Le Roux states that there is in a certain town a priest who professes to have a secret remedy for incurable diseases. His door is thronged with patients from 5 a.m. to 8 p.m., and appointments have to be made two or three weeks beforehand.' This clerical healer is said to hand over £4,000 each year to his archbishop for the purposes of the Church: what he keeps for himself is not stated. The pharmaceutical chemists, with their various "specialities" and plausibly written pamphlets vaunting their efficacy, are also formidable rivals to the legitimate practitioner. The attempts which have been made by medical associations of different kinds to remedy these evils have so far failed: and, indeed, it is not easy to see how there can be any real betterment in the state of the profession so long as it is overcrowded. If M. Le Roux's article deters any considerable number of parents from making doctors of their sons, it will have served a useful purpose. It might not be amiss if some popular journalist were to enlighten the mind of the British paterfamilias on the same subject.—*B. M. J.*

Dr. H. C. Parsons, Trinity '92, late of Johns Hopkins, is studying in London.

Sir William Mac Cormac, the well-known surgeon of London, Eng., is rapidly recovering from his recent serious illness and is now able to sit up daily.

Sir Douglas Maclagan, of Edinburgh, Scotland, has intimated his intention of resigning the chair of Forensic Medicine, which he has held since 1862, in the University of Edinburgh, at a salary of £800 a year. He is to be succeeded by Sir Henry Littlejohn, of the same city.

A NEW APERIENT WATER.

BY PRIVY COUNCILLOR PROF. OSCAR LEIBREICH.

(Regius Professor of Pharmacology, University of Berlin.)

It has oftentimes been pointed out, and that, too, with reference to mineral waters, that the first condition of therapeutic efficacy is the constancy of the remedy employed. In the case of natural mineral waters this point is of the greatest importance.

The aperient waters offer the one sole exception in regard to this constancy among our natural mineral springs. These are formed by impregnation of the natural basins which supply the mineral constituents. From this, as observation teaches us, there arises an extraordinary inconstancy of the chemical constituents. The aperient waters, therefore, form an exception to the mineral springs proper. For medical purposes it is absolutely necessary, in prescribing this water, to know the dose. It has happened not infrequently that a wineglassful of aperient water has been shown to contain the same amount of mineral constituents as the practitioner would, from the analysis, expect to be present in a tumblerful. It is obvious, therefore, that neither the practitioner nor the patient can form a correct opinion in this manner; and under these circumstances it may even happen that an unexpectedly great degree of concentration may do harm by useless irritation of the intestines. There is a further disadvantage arising from changes in mineral constituents, so that, instead of the sulphates which the water should contain, chlorides are present in an injurious amount. The opinion has very often been expressed that the bottling of such waters should be under scientific control, so that their proper constitution should be ensured exactly in the same way as that of other medicines is regulated by the Pharmacopœia.

It is, therefore, a matter for high satisfaction that the aperient water, "Apenta," from the Uj Hunyadi Springs in Ofen, has been placed under State control. The Royal Hungarian Chemical State Institute (Ministry of Agriculture) has undertaken this charge, and, therefore, it is now possible to obtain a water which is free from injurious extraneous waters infected with organic substances. The analysis has been published by Professor Liebermann, Director of the said Institute. The proportion of sulphate of soda to

sulphate of magnesia is 15.432 to 24.4968 in the litre, so that this water is to be classed with the best aperient waters, and may be pronounced one of the strongest. Owing to the constancy of the Apenta water ensured by the State guarantee, that confidence in aperient waters which had been lost will be revived in favor of this important therapeutic agent. The constancy of the Apenta water makes the use of it indicated not only as an occasional purgative, but in systematic courses of treatment. It is particularly recommended for the regulation of tissue change in the most diverse diseases, in obesity, chronic constipation, portal obstruction, hæmorrhoids. Whether the lithia contained in this water is of any therapeutic importance is at present doubtful, but its presence is a distinctive feature in the analysis.

Personals, Etc.

Dr. Phillips has moved to 11 King Street West.

Dr. John Hubbard, of Brock Avenue, has left the city.

Dr. McKeown has removed from 92 to 82 McCaul Street.

Dr. H. J. Hamilton has removed to No. 329 Church Street.

Dr. H. A. Bruce, Tor. '92, has obtained the degree of F.R.C.S.

Dr. J. Noble is again running for School Trustee. We wish the doctor every success.

Dr. J. S. King has opened a branch office at the drug store of D. C. Ferguson, 529 King Street West.

Dr. A. E. Awde, of Dovercourt Road, has resigned his seat on the School Board, as he has moved to Philadelphia, where he will occupy a position in one of the large hospitals.

The Chatham Medical and Surgical Society has been reorganized and will meet on the first Wednesday of each month. Dr. J. H. Duncan has been elected president, and Dr. R. V. Bray, secretary.

The report of the eleventh annual meeting of the Association of Executive Health Officers of Ontario, held at Niagara-on-the-Lake, September 14th, 1896, has been received.

Dr. A. Boultbee, of Bloor Street East, has been appointed Medical Superintendent of the Keeley Institute (Dwight, Ill.) at the corner of Sherbourne and Lynden Streets, Toronto. The doctor was married on December 28th, to Miss Hannaford, of Toronto.

Drs. Adam Wright and E. E. King have, we understand, purchased from The Bryant Press the *Canadian Practitioner*, which they propose to make brighter and more attractive than ever. Perhaps the editors will permit us to extend to them our congratulations. We have no doubt that the profession will in the future as in the past give them their heartiest support.

In these days, when there is such a tendency amongst a certain class of druggists to substitution, the practitioner cannot be too careful when ordering the preparations of certain reliable and well-known firms, not only to state on their prescription just what they wished dispensed, but also to make a point of examining the bottle of medicine after being put up in order to see just what has been used in its composition. Fairchild Bros. & Foster, of New York, who have been placing on the market for years their time-tried pepsin and peptone preparations, recently, by legal procedures, gave a quietus to this disgraceful state of matters which we hope will last for some time to come.

MARRIAGES.

Dr. T. H. Halsted was married on October 7th to Miss C. C. Palmer.

Dr. Norman Anderson, of Toronto, was united in marriage on December 8th to Miss Berta Macdonell.

DEATHS.

Dr. R. J. Hastings, who for a year or so has practised on King Street East, died of septic pneumonia on December 1st. The doctor was a popular young man and was rapidly gathering round him a large clientele. He was a cousin of Drs. A. and C. J. C. O. Hastings, of Toronto.

The death of Dr. Déclat is announced. He was the author of several treatises on antiseptic methods of treatment. The most remarkable of these is on the treatment of infectious diseases by carbolic acid. He was well known in Paris, and after a long medical career retired to Nice, where his death took place.

We regret to announce the death of Dr. R. H. Gowland, Tor. '92, which took place at Johns Hopkins hospital last month, where he had undergone an operation for some kidney trouble. Deceased had commenced practice in Hamilton, his home city, and was highly esteemed by all who knew him. He leaves a wife and one child.

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

NOTES ON THE SYMPTOMATOLOGY AND DIAGNOSIS OF SENSORY, MOTOR OR TROPHIC PARALYSIS, CONSECUTIVE TO LESIONS OF CONTIGUOUS PARTS, RESULTING FROM VIOLENCE.

BY THOMAS H. MANLEY, M.D.,

Professor of Surgery in the New York Clinical School of Medicine, New York.

In the vast majority of cases of the above named description, we will have a clear history of trauma, as a contusion, sprain, fracture or dislocation. The immediate proximate results are direct disorganization of structure, with or without advanced inflammatory changes. The peripheral nerves of a prehensive organ, as the upper extremity, which is called into a great complexity of motion, more often suffer from direct damage, and are therefore the seat of more pronounced pathologic changes than those of the lower limb.

The nerve sheaths of the brachial plexus, as they dip under the acromial end of the clavicle, pass closely to the shoulder joint, and are so firmly held in position by the cellular tissues that a sudden wrench of sufficient violence to twist the head of the humerus out

of the glenoid cavity—especially when the dislocation is forward, by a combination of pressure, locomotion and torsion—in many cases so damages the neural structures as to thereafter dangerously compromise the vitality, nutrition and contractile power of the muscles which this plexus animates. Hence, with many dislocations at the shoulder, we will find the full functional strength of the joint permanently impaired. And when active myositis spreads, and the thoracic muscles with the advance of sclerogenic changes within the muscle sheaths with adhesions binding more or less the various muscles together, the range of articular motion is greatly restricted. In others, although reduction is readily effected, a more serious phase of contracture may follow. Progressive parenchymatous inflammation may occupy one or more muscles and wholly destroy their striated corpuscular elements. When this change occurs, degeneration, atrophy and immobility follow, and the full functional use of the joints is forever lost. In another class, though not so very rare, we will observe that from the time of accident, as all muscular contractile power at the shoulder is destroyed, the bone cannot be retained in the socket, but continually falls out as often as returned. When, however, none of the muscles, except those which fix the bone in its articulation, are injured, the limb may possess a fair share of usefulness. Similar myopathic states are met with in other articulations, but in none so commonly and so well accentuated as at the shoulder. The primary, initial and predominant lesion here is neural; the muscular, arthritic, vascular and osseous are chiefly, if not solely, consecutive.

Among injuries which occupy the front rank in frequency and importance in inducing circumscribed or extensive atrophies or motorpalsy, are the different varieties of fracture. These lesions entail damage to the neural trunks, the muscular and other tissues —first, by extreme tension, contusion or laceration; secondly, by the extremely active inflammatory reaction, which may follow, when the extent of bone disorganization is extensive; and thirdly, by inclusion or pressure, or by an over-riding or angular deformity of the reunited bone shaft.

In certain phases of fracture which involve different bones, temporary or permanent atrophic phenomena, with or without motor paralysis, are unavoidable and inevitable, during early childhood particularly. Hence, in consequence of this, unless a critical and discriminating examination is made, with a full knowledge of

this fact, after the reparative processes are complete, the practitioner or surgeon may be unjustly blamed, or be compelled to defend a malpractice suit, for the presence of a defect or deformity for which the processes of nature, and not he, are responsible.

The very means which have been employed to bring the overriding fragments of a broken femur into apposition—bandage-pressure, the splint, the weight, extension or counter-extension—though necessary appliances to obviate a greater evil, each and all by pressure, interfere with the circulation of the limb, and its fixation disturbs normal nutritive processes. The protracted inaction necessary in the fracture of a femur causes an arrest of growth in children.

Not long since, Prof. A. M. Phelps, in a series of experiments on the lower animal, demonstrated that a healthy joint could bear immobilization with impunity. With the limb in its entirety, however—the muscular, neural and osseous structures—it is quite different. Any pathological condition involving a limited area of a limb of a child, be it of a constitutional or traumatic character, attended with inflammation entailing articular and muscular inaction, is as a rule attended not only with atropho-motor paralysis, but likewise with arrest of growth. So that on careful measurement it will be found that the sound limb has gained on the diseased to a marked extent. When the limb is confined but a short period the difference will be slight. It is a well-known fact that during the growing stages of the body, an attack of sickness or confinement, rendered necessary by injury, the body suddenly lengthens out, so that as the patient takes his feet his gain in stature is usually marked and noticed by everyone. Perhaps the fresh impetus imparted to the sound side on rest in bed, with temporary arrest of developmental processes on the injured side, in cases of femoral fractures and other injuries of the lower extremities in children, may account for the differences in length after processes of repair are complete. This explains what had long been a mystery to me in cases of femoral fracture in children who had marked shortening when they recovered; yet, when the fractures were in the lower third of the shaft and subperiosteal, and when the fragments were brought into perfect apposition, and on recovery the perfect outline of the shaft was evident from an examination of its external outline, still there was a shortening of from one-quarter to an inch. When we finally encountered numerous cases of simple injury at the hip, followed by myositis or arthritis without any lesion of

bone at all, but which after recovery left the patient with a shortened limb, though with full functional use, the difficulties in etiology became greater than ever.

There can be scarcely a doubt that many cases of malpractice have been instituted in that class of fracture—cases in which the deformity or shortening resulting was often in part, if not wholly, dependent on atrophic vaso-motor changes, temporarily disturbing nutritive processes and thereby arresting growth, rather than solely by an osseous distortion of any description whatever.

The essence of pathological changes in those cases of motor-atrophy accompanied with an arrest of growth, is neuropathic: an enervation induced in the first place by a propagation of inflammation from the muscle to the nerve. The nervous system in early life must serve a dual purpose. First, to preside over the normal nutrition, and secondly, to supply the necessary pabulum in normal growth and development.

In those cases marked by an arrest of growth, the second or temporary function is only in abeyance. But in those neurotrophic manifestations, so common in disorganizing injuries, in which the visible gross lesions are chiefly arthritic or osseous, the temporary or permanent pathological changes present a complexity and diversity of phases. These will be more readily comprehended if divided into groups.

The first will embrace those cases in which after the injury of a joint there is an absolute arrest of growth involving the entire limb, and in which trophic inhibition is the most positive neural symptom, i.e., though the limb has temporarily ceased to grow, mobility is not wholly arrested, and though certain muscle groups, single muscles, or parts of a muscle, may be wanting in reflex response to the will, none will resist electrical irritation. And furthermore, though in time functional restoration has returned, and the local disease has vanished, yet on a critical inspection of the joint (if one of a complexity of motion as the hip, shoulder or wrist) it will be noted that there is a want of uniformity in the strength and mobility of certain sets of muscles, and likewise a marked disparity in their contour and consistence, thereby, at least for a time, giving the limb below (if the leg) a distorted inclination—a partly flexed, adducted, abducted or rotatory position, which, however, in time with appropriate treatment, or even without treatment, in healthy subjects may be corrected by a later full development of the enfeebled parts, or by a com-

pensatory inclination or adjustment of subsidiary or neighboring structures. Indeed, in many of the most aggravated cases, with a slight raise on the shoe and but a moderate inclination of the pelvis, without a nude examination scientifically executed, no one can detect any marked impediment in locomotion.

The pathology of this first type of motor-trophic action has in recent years been made the subject of extensive experimental and clinical study by neurologists and surgeons. Raymond declares that it is wholly dependent on changes in the ganglionic cells of the interior coruna of the cord, and technically designates it "peripheral motor-atrophic paralysis," and claims that it is of a reflex nature and purely eccentric in origin (Raymond, "Malad du System Nerveux," p. 171). This view will scarcely suffice, for in many important particulars it is wanting in clinical support. His theory —one which has the support of Hammond, Dana, Wood, Duchenne, Rosenthal, Sandras and others—though it accounts for many of the phenomena present, is yet very defective. As a matter of fact, in many of the most typical cases which we ever meet there is no paralysis of any kind. In some respects it is quite the contrary. The crippled limb is always hyperæsthetic over its entire areas. The child does not move it, not because he cannot, but because as voluntary motion of it gives him pain he keeps it quiet. Atrophic muscular changes are not well marked by any means in all cases. My own impression is that trophic influence is suspended, as a consecutive incident to inflammation. The original lesion is a multiple neuritis, which is propagated along the nerve trunks to the trophic ganglia or such centres as preside, not over nutrition, as the vasomotor system, but central processes of development and growth. Neurologists and pathologists of modern times quite generally agree that the anterior nerve root is both motor and trophic. Is it not reasonable to assume, too, that there are molecular elements lodged in the ganglionic cells or anterior coruna, whose sole functions are to preside over growth, and which, after maturity of the body, having accomplished their purpose, assimilate with other elements or are absorbed and disappear?

The function of the ganglia lodged in the anterior coruna is demonstrated rather by the study of morbid anatomy and clinical observations than by physiological proofs. We may have, as is well known, motor-palsy without marked atrophy, and progressive muscular atrophy or pseudo-hypertrophy without serious interference with mobility. Is it not rational then to assume that in

those cases of arrest of growth in a limb the centres only concerned in the phenomena of development are affected, and that such centres constitute a distinct and separate neural entity in the anatomo-physiological make-up of the spinal cord?

An inflammatory process having been propagated to the growth centres, there is also attendant a migration of leucocytes and proliferation of nuclei of the fixed connective tissue cells, which press on and interfere with the nutrition of the nerve fibres and cellules to such an extent as to temporarily suppress function.

As the nerve root escapes through the intervertebral foramen, it is freely invested outside of its dural sheath by loose connective tissue which readily hypertrophies and impedes circulation after inflammatory processes have been transmitted to it.

Now the usual rule is that after a joint has been injured through a fall, twist or bruise, or a bone has been fractured or dislocated, processes of repair are prompt and the patient is soon on his feet again. But in a considerable number the sequence is not so simple. In this class we naturally enquire for the fundamental cause, why one so soon and so completely recovers, while others drift into a chronic state, and sometimes make at best imperfect recoveries? Without the least doubt the cause lies in a constitutional cachexia, either acquired or inherited, as tubercle rheumatism or syphilis. With one the inflammatory exudate is moderate and is soon dispersed by resolution and resorption. On the contrary, when either one of the other dyscrasiæ, as syphilis or rheumatism, is in operation its role involves a complex and altogether more serious pathological change than the other. With the latter there is a tendency of the inflammatory processes to spread into and involve the cellular elements and fibrils of the nerves, when we will have genuine parenchymatous inflammation. But in most cases this will cease before degenerative changes follow, though seldom without seriously disturbing the nutrition of the ganglionic cells, reducing their number or leaving a granular residue which will be slow of resorption.

When this process is complete on the affected side, nature is permitted, as it were, to finish her work of complete growth and development. The limb on the sound side during the months of distraint has been growing, so that on comparison as our patient "takes his feet," we will find a marked disparity in length which the injured limb never regains. In the second group of this class of injuries, the lesion of the nerve is direct and tangible. But it

differs pathologically from the first, inasmuch as arrest of growth is not always so accentuated, nor are constant tropho-motor changes of a peripheral order always present. The spinal changes are always secondary to the traumatism. They are reflected back as a motor-paresis, with muscular and other tissue wasting. Though always present they are more definite and positive when we have evidence of direct injury to a nerve or plexus of nerves, as when their trunks are lacerated by spiculæ of fractured bone, by the pressure of a viscus or by excessive callus, by great and sudden stretching or contusion as in certain dislocations. In this class of cases, most authors on the neural system rather confine their observations to the nerve roots and the secondary changes in the muscles, as though these tissues alone were the only ones that suffered atrophic or degenerative changes. This is a great mistake from a surgical standpoint, for to the most superficial observer it is evident that the vaso-motor system is profoundly affected and that degenerative changes are active when a fracture is very slow of repair, or serious local symptoms follow a dislocation. As a matter of fact the circulation is slow and languid and an œdematous state of the limbs everywhere is seen where the dense investing aponeurotic sheath does not confine the capillaries or vessels. The bone elements actively participate, become anæmic, the seat of fatty degeneration, are very brittle and may fracture at the distal part of the same limb with great ease.

In certain cases we will, in consequence of a definite concentrated pressure on a nerve trunk, observe a series of symptoms indicative of positive parenchymatous changes at the seat of compression. A pathological condition here is met with, which may be appropriately designated *transverse peripheral myolitis*. It almost invariably occurs as a consecutive condition to fracture, and is directly caused by the inclusion of a nerve trunk in a callus or by the nerve being caught between the osseous solder and another neighboring bone shaft, as in fracture of the clavicle at the acromial end, and also those of the ribs, forearms and legs. In many of the slighter cases of callus pressure, as the cartilaginous knob is absorbed the paralysis gradually disappears; hence it is only in those cases attended with considerable over-riding of the fragments, or direct canalization of the callus by the nerve itself, that we have any permanent loss of power or sensation following.

(To be continued.)

Surgery.

SURGERY WITHOUT ANÆSTHETICS.

One of the most interesting papers read at the recent celebration in Boston of the fiftieth anniversary of the first administration of ether in a surgical operation was that by Dr. John Ashhurst, of Philadelphia, on "Surgery Before the Days of Anæsthetics." It vividly recalls the horrors of those days when the surgeon's knife was an object of far greater terror than now, and inflicted untold tortures upon the conscious patient.

"A study of the condition of surgery before the days of anæsthesia," said Dr. Ashhurst, "reveals on the one hand a picture of heroic boldness and masterly self-control on the part of the surgeon, and on the other a ghastly panorama, sometimes of stoic fortitude and endurance, sometimes of abject terror and humiliation—but always of agonizing wretchedness and pain—on the part of the unhappy victim who required the surgeon's aid.

"The 'pitilessness' which Celcus urged as an essential trait in the operative surgeon was, before the days of anæsthesia, a feature in the surgeon's career which impressed very strongly the public generally as well as those immediately connected with the operation. It is interesting to recall that Sir James Simpson, of Edinburgh, shortly after beginning his professional studies, was so affected by 'seeing the terrible agony of a poor Highland woman under amputation of the breast,' that he resolved to abandon a medical career and seek other occupation: happily his intention was reconsidered, and he returned to his studies, asking himself 'Can anything be done to make operations less painful?' and, as every one knows, in less than twenty years became a high priest of anæsthesia, and the introducer into surgical and obstetrical practice of ether's great rival, chloroform.

"No braver or more gallant gentleman ever lived than Admiral Viscount Nelson, and after his right elbow had been shattered by a French bullet in the assault at Teneriffe he manifested the utmost courage, refusing to be taken to the nearest ship lest the sight of his injury should alarm the wife of a fellow officer whose own fate was uncertain, and when his own ship was reached he climbed up its side without assistance, saying: 'Tell the surgeon to make haste and get his instruments. I know I must lose my right arm,

so the sooner it is off the better.' 'He underwent the amputation,' we learn from a private letter of one of his midshipmen, 'with the same firmness and courage that have always marked his character.' And yet so painfully was he affected by the coldness of the operator's knife that when next going into action at the famous battle of the Nile he gave standing orders to his surgeons that hot water should always be kept in readiness during an engagement, so that if another operation should be required he might at least have the poor comfort of being cut with warm instruments.

"On the side of the surgeon we find throughout the ages a constant effort to diminish the terrors of operations and a continuous reprobation of the distressful, not to say cruel, modes of practice adopted by preceding generations. And yet the time is not very far distant from ours when they lopped off a limb by striking it violently with a heavy knife; that time when they knew neither how to stop nor how to prevent hæmorrhage but by burning the part whence the blood jetted with boiling oil or the red hot iron: that time when surgeons armed themselves at every moment with pincers, with burning cauteries and with instruments, the representations even of which cause terror.

"The belief that operations might be rendered painless appears to have been present in the minds of surgeons from the earliest periods. Witness the accounts of the Memphis stone, described by Dioscorides and Pliny, which by steeping in vinegar was made to give forth the fumes of carbonic acid; and of the mandragora, employed, according to Theodoric, when mixed with other narcotics, by inhalation, and causing a sleep from which the patient could only be aroused by the fumes of vinegar. So profound was the stupor induced by this drug that Bodin assures us that under its influence a man submitted without consciousness to a painful operation and continued to sleep for several days thereafter.

"Vigo speaks of the whole body being 'brought asleep by the smelling of a sponge wherein opium is,' but warns his readers that the practice is dangerous, because the use of opium is sometimes followed by gangrene. In his work on 'Natural Magic,' Baptista Porta speaks of a volatile drug kept in leaden vessels, which produced sleep when applied to the nostrils, and Perrin suggested that this may actually have been ether or some other of our modern anæsthetic agents.

"Mental preoccupation was sometimes sought as a means of preventing pain. Richard Wiseman found that soldiers dreaded the

loss of a limb much less if it were removed immediately, while they were 'in the heat of the fight,' than if the operation were postponed until the next day; 'wherefore,' he says, 'cut it off quickly, while the soldier is heated and in mettle;' and Renauldin recalls the case of the amiable Dolomieu, who, exposed to the pangs of starvation in a Neapolitan dungeon, measurably alleviated his own distress by engaging in the composition of a treatise on mineralogy, while his unfortunate servant and fellow prisoner, who had not the same intellectual resources, was hungry enough for both.

"But the presence of pain was not the only evil dreaded by our predecessors in attempting important operations; the great risk of fatal accident from some involuntary movement of the patient was constantly present to the mind of the conscientious surgeon. 'How often,' says Dr. Valentine Mott, 'when operating in some deep, dark wound, along the course of some great vein, with thin walls alternately distended and flaccid with vital current —how often have I dreaded that some unfortunate struggle of the patient would deviate the knife a little from its proper course, and that I, who fain would be the deliverer, should involuntarily become the executioner, seeing my patient perish in my hands by the most appalling form of death! Had he been insensible I should have felt no alarm.'

"Coming down to the days more immediately preceding the date of the great discovery, we find that opium and alcohol were the only agents which continued to be regarded as of practical value in diminishing the pain of operations, though the attendant disadvantages of their employment were, of course, recognized. Meanwhile, facts were accumulating, the significance of which we now plainly recognize, but which excited no attention.

"Sir Humphry Davy, in the early days of the nineteenth century, suggested the use of nitrous oxide gas as an anæsthetic in minor operations, and it was the custom of some of our medical schools—at the University of Pennsylvania, for one—for students to breathe 'laughing gas,' as it was then called, for diversion. But yet—and yet—surgeons went on, in every country, cutting and burning, and patients went on writhing and screaming, until the 16th day of October, in the year 1846, in the Massachusetts General Hospital, Dr. John C. Warren painlessly removed a tumor from a man who had been previously etherized by Dr. William T. G. Morton, and surgical anæsthesia became the priceless heritage of the civilized world."—*Sci. Am.* F. W. S.

Pediatrics.

NOTES UPON THE ESTIMATION OF THE NUMBER OF BACTERIA IN MILK.*

BY MAUD J. FRYE, M.D., BUFFALO,

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THE examinations of milk which this paper reports were undertaken on account of the writer's interest in pediatrics, the object in doing the work being to learn, so far as such a bacteriological test would teach, the fitness of milk from various sources for infant feeding. The facilities of the pathological laboratory of the University of Buffalo were at the experimenter's disposal, and the work was done under the direction of Dr. Herbert U. Williams.

The method used for counting bacteria in milk was as follows: To a test tube containing a definite quantity of sterile water, say 50 c.c., 0.5 c.c. of milk was added and the contents of the tube thoroughly shaken. One cubic centimetre of this mixture, containing 0.01 c.c. of milk, by means of a sterile pipette was added to a test tube containing liquefied sterile nutrient gelatine or agar. This tube was then whirled or agitated until the gelatine and diluted milk were thoroughly mixed. The contents of the tube were then poured into a sterile Petri plate. These plates, whether gelatine or agar was used, were kept at the room temperature. At the end of forty-eight hours in summer, after seventy-two or more in winter, the colonies were counted. The apparatus used for this was devised in the laboratory. The Petri dish was placed over a piece of glass, the under surface of which was painted black, the upper surface ruled in square centimetres. Then with the aid of a small magnifying glass, which in this case was an ordinary engraver's lens, the colonies were counted. If not many were present the entire surface was gone over: if the number was great, ten alternate squares were counted and the number on the plate estimated from the area of the dish. The number of colonies represented approximately the number of bacteria in 0.01 c.c. of

* Read before the Buffalo Academy of Medicine, June 16th, 1896.

milk. At the time of making the culture two control plates, one of the water used in diluting, one of the medium, were made. So long as these remained sterile whatever grew on the milk plates necessarily had its origin in the milk.

The dilution of milk is necessary for two reasons: First, to add to the gelatine even 0.5 c.c. of milk would make a mixture so opaque that the little grayish or creamy white colonies would be indiscernible. Second, even in the best milk the number of bacteria in 0.5 c.c. is so great that it would be almost impossible to count them. Indeed, it is only the best milk that requires so little dilution. At this time of the year (June) for grocery milk a second dilution is done and cultures are made from a mixture of which 1 c.c. contains approximately 0.0001 c.c. of milk. Of course so much dilution increases materially the chance for error.

Gelatine was used as a culture medium until the weather became so warm that it liquefied at the room temperature, when agar was substituted. Either medium has its disadvantages. The rapid development of liquefying organisms in gelatine soon renders counting impossible. No less an objection is the cloudiness which certain bacteria produce in agar. In which medium the greater number of colonies develop was not determined. One experiment showed about the same number in each.

The influence of temperature on the number of bacteria in milk is noticed in comparing the results of examinations of the same milk supply made last winter and this spring and summer.

A point of some interest is that all bacteria do not develop with equal rapidity. There will be a considerable increase beyond the number found on the usual day of counting.

Certified milk, plated February 6th, on February 11th showed 88 colonies; on the 13th, 139.

Grocery milk, plated March 21st, on the 23rd showed 246 colonies: on the 24th, 369.

Sterilized milk (from dairy), plated April 2nd, gave 8 colonies on the 7th, 10 on the 11th. No further increase was found, though the culture was kept one month.

Crèche milk, plated May 13th, on the 16th showed 84 colonies: on the 18th, 158.

Certified milk, plated May 9th, on the 12th showed 255; on the 14th, 323. The same, plated May 16th, gave on the 18th, 350; on the 19th, 480. The same, in agar, June 10th, showed on the 12th, 44: on the 13th, 58.

It is well known that milk is a medium in which bacteria multiply with great rapidity. Indeed the enormous numbers found in milk depend probably not so much on the extent of the original contamination as upon the length of time and the conditions under which the milk has been kept. But one experiment illustrating this has been done. Certified milk of that day's milking was brought to the laboratory and directly plated. Two days later the plates showed 57,600 bacteria to the cubic centimetre. The milk was left in laboratory, covered as it is sold, for four hours, the room temperature being from 68° to 72° F. A second plate was then made which at the end of forty-eight hours showed 747,200 per c.c.

The examinations of which records have been kept give the following results:

TABLE I.—MILK AS DELIVERED TO THE CONSUMER.

1. December 28th, 1895, bottled milk . .	400,000 to c.c.	
2. January 28th, 1896, sold by measure	590,000	
3. May 27th, sold by measure	24,613,900	
4. May 29th (same as No. 3)	9,820,000	Many moulds.
5. May 30th, brought from dairy	9,963,000	
6. May 31st, bottled milk	796,800	
7. June 3rd (same as No. 1 and No. 8) .	48,000	
8. June 11th (same as No. 1 and No. 7)	6,630,000	
9. June 11th, brought from dairy	43,600,000	

The conditions under which cultures 3 and 4 were made were not fair, as the milk had stood some time in the laboratory before being plated. They merely illustrate the possibilities of milk as a culture medium. In all other cases the milk, which was brought to the laboratory in sterile bottles, or in the bottles in which it was delivered to the consumer, was immediately plated. The specimens brought from dairies were in both cases got in the afternoon. Morning cultures would show fewer colonies, yet the milk is bought even for little children in the afternoon.

TABLE II.—GROCERY MILK.

1. January 26th	25,000 to c.c.	
2. March 23rd	246,000	
3. May 25th	2,619,900	
4. May 29th (culture at 4 p.m.)	25,090,000	Moulds.
5. June 10th (same as No. 1)	1,220,000	
6. June 11th (culture at 11 a.m.; same as No 4)	7,390,000	

The milk sold at the grocery which supplied the material for cultures 1 and 5 is received each morning from the country. The first culture was made during extremely cold weather and probably does not represent the average condition of that milk in winter. Grocery milk compares very favorably with that from other sources.

Table III. gives the results of examinations of "certified milk." This milk comes from a dairy located some distance out of Buffalo, the manager of which endeavors to supply clean and wholesome milk. The stables are kept scrupulously clean; the cows, all of which have been submitted to the tuberculin test, are daily groomed; the food and water supply of the cattle receive careful attention; the milkers are required to be clean, and the pails, bottles, etc., are bacteriologially clean. The milk is shipped and delivered packed in ice. The name "certified" is given to the milk from the fact that a committee of physicians certify to their knowledge of its condition, a bacteriological examination being made semi-monthly by Dr. Herbert M. Hill to determine how nearly clean the milk is kept.

TABLE III.—CERTIFIED MILK.

1. January 20th	13,000 to c.c.
2. February 11th	10,000
3. May 12th	25,900
4. May 18th	35,000
5. June 2nd	132,720
6. June 10th	4,400
7. June 15th	57,600

A culture made by Dr. Hill of the same milk on May 18th, a different medium being used, gave 26,000, which we regard as a confirmation of real results.

Table IV. is milk prepared for the infants received at the Fitch Crèche, a day nursery for the children of working women. Milk sent from the country on the morning of the day it is used is sterilized in the Arnold sterilizer, being kept at the boiling point for forty-five minutes. The cream used is prepared in the same way. The bottles containing milk and cream are stoppered with absorbent cotton, cooled, and put into the ice chest. Boiled water is kept in a fruit can in the ice chest. The lime water used is made at the creche, with boiling water. The milk sugar is dissolved fresh in boiling water each time. These ingredients are

mixed for each feeding as needed. The bottles are filled after using with cold water, then as soon as possible scalded and filled and left to stand with a solution of borax. All dishes used in making up the mixture are kept for this purpose alone, and are well scalded after use. That the preparing of the food is carefully done I am confident. Yet examinations of the mixture give the following results:

TABLE IV.—CRECHE STANDARD MIXTURE.

1. May 16th	8,400 to c.c.
2. May 29th	17,600
3. June 1st	456,320
4. June 12th	31,000
5. June 13th	851,440
6. June 15th	1,002,400

The fault in this process is that the bottles have to be opened repeatedly, giving chance for contamination. But the bacteria in this mixture, really only a relatively small number, seem harmless. At any rate the babies thrive on it.

Some points which may be noted are these:

Certified milk contains comparatively few liquefying organisms, cultures occasionally showing none at all. The hay bacillus and the potato bacillus, both liquefying organisms common to milk, and both by some accused of an active part in certain digestive troubles of infancy, may be said to be present in this milk in small numbers if at all.

No count is anything more than approximately correct. All estimates probably fall far short of the actual number of bacteria present.

Counts, to be of value in comparing the purity of various kinds of milk, must be made under identical conditions as regards medium, temperature of room, and time of counting.

This work was begun with but little faith in its value, but as it went on the conviction grew that by ascertaining the number of bacteria in a given quantity of milk we had a valuable test as to its fitness for food; the original amount of contamination, the length of time the milk has been kept, and the conditions of temperature and cleanliness determining the luxuriance of bacterial growth. A. S. G.

Pathology.

NOTES ON THE COMPOSITION OF THE BLOOD SERUM IN PERNICIOUS ANÆMIA.

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AND
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As far as we can learn, the chemical analysis of any very large quantity of blood or blood serum from cases of pernicious anæmia has so far never been made, and, although we freely admit that objections may be taken to the following analysis on the ground that the blood was not obtained *intra vitam*, nevertheless, we think the following analysis of the blood serum obtained at the necropsy upon a typical case of the disease deserves to be placed upon record. This analysis was made from the serum obtained from an extremely distended right heart, removed five hours after death in the month of February. It may be noted that the mean temperature in Montreal in February is several degrees below freezing point, and that the body in this case had been placed immediately after death in a room the temperature of which was close upon freezing point; the room, indeed, was so cold as to make the performance of the necropsy somewhat of an ordeal. The body was found not completely cold.

History of the Case.

Before giving the analysis, it will be well to say a few words in reference to the history of the case.

The patient, a man of fifty-three, began to feel weak in March, 1892; there was a numb sensation in the lower extremities as from "pins and needles," and he soon noticed that his knees were liable to give way under him. He had lived in England until the age of forty-two, when he came to Canada. For the greater part of his life he had been a carpenter; the last two years he had undertaken work as a shorthand reporter. His personal history was very good. About the only trouble he had suffered from previously was a right-sided rupture, brought about when he was forty by lifting a heavy weight. His condition upon admission to the Montreal General Hospital, under Dr. George Ross, in August, 1892, was one of great pallor and slow mental condition, with no pain experienced

in any region. The knee-jerks were much diminished. The appetite was good, the digestive system apparently in fair condition; there was no abdominal pain. The arteries exhibited a slight amount of arterio-sclerosis; the heart was definitely enlarged, with the apex at the fifth interspace, just outside the nipple line. Upon auscultation, there was noted a soft blowing systolic murmur at the apex. An examination of the blood immediately on admission gave the number of red corpuscles at 570,000, a proportion of white to red corpuscles at 1 in 200 (about), the amount of hæmoglobin at 25 per cent., and this confirmed the diagnosis of pernicious anæmia. The patient was placed upon increasing doses of liquor arsenicalis, and in less than a fortnight the number of red corpuscles had increased to 1,353,333, and the patient was feeling stronger and was of better color. On September 7th the red corpuscles were 2,006,000, proportion of white to red 1 in 301, and on September 17th, the number still further rising to 2,363,333, the proportion of white to red was 1 in 331: hæmoglobin had increased to 36 per cent. The patient was discharged on this date. On February 8th, 1893, he returned to the hospital, and was under Dr. James Stewart. The number of the red corpuscles had sunk to 700,000. The percentage of hæmoglobin had not fallen to the same extent; indeed, comparing the hæmoglobin percentage with the number of corpuscles, there was an actual increase of 23 per cent. per corpuscle. The patient was very prostrate, and the progressive asthenia ended in death upon February 21st. There had never been any hæmorrhage or diarrhœa, and vomiting occurred but twice, and on both occasions after taking arsenic.

Necropsy.

The necropsy, performed by one of us, fully confirmed the diagnosis made during life.

There was the characteristic lemon-yellow tint of pernicious anæmia, and the subcutaneous fat was found in fair amount; the brain was large and anæmic; the lungs also pale, but crepitant throughout; the stomach was large, with distinctly thin and pale walls, presenting two small papillomatous overgrowths close to the pylorus (? gastritis polyposa). The lower part of the ileum presented also walls greatly thinned. The liver was large (2,020 grammes), brown in color, varying to orange yellow, and friable. Sections showed the characteristic Quincke's siderosis both by the ammonium sulphide and by the hydrochloric acid and potassium ferrocyanide tests, with some fatty degeneration. The bile duct

was pervious, and a greenish-yellow bile stained all the intestinal contents. The kidneys showed a large cortex, and were pale, fatty and friable. The bladder was distended with more than 500 c.cm. of dark amber-colored urine; prostate not enlarged. The spleen was of fair size, firm on section, but it yielded, upon being scraped, a considerable amount of purplish bloody pulp. The sternal bone marrow was increased in amount, and of a purplish-red color. There was a right inguinal hernia, the pouch being filled with a large adherent mass of great omental tissue.

Turning now to the circulatory system, there were found slight atheromatous changes in the aorta. The heart was large (370 grammes), the right side being especially distended, indeed relatively enormous, auricle and ventricle being filled with pale very dilute blood, in which floated some soft reddish clot. The left side was smaller, the left ventricle dilated, with slight hypertrophy. The tricuspid valves were distinctly thickened along their free margins, and only admitted three fingers with difficulty. The mitral valves were still more fibroid. The aortic and pulmonary valves were competent and normal.

Of the blood distending the right heart, 300 c.cm. were immediately removed, placed in a clean bottle, and sent up to the Chemical Laboratory of McGill Medical College.

The analysis of the blood serum, made by one of us, gave the following results:

The clear, almost colorless, serum had a specific gravity of 1026.1. This is below the figure usually given as being that of the specific gravity of serum, namely 1027 to 1030. It contained only 5.2 per cent. of proteids (by weight). These proteids consisted of 2.3 per cent. of globulins precipitated by saturation with magnesium sulphate, and 2.9 per cent. of serum albumin proper. There was 0.875 per cent. of ash. It will thus be seen that not only were the total proteids reduced about 40 per cent. below the average normal quantity, but also that the normal ratio of the globulins to the serum albumin was considerably altered, the ash also was about 12½ per cent. above the normal.

The total quantity of iron found in the liver was 0.2433 per cent. by weight calculated to the fresh undried tissue. This is equivalent to about 0.72 per cent. in the dried tissue. The estimation accords fully with the observations of previous observers, as showing the very great increase in the iron contained in the liver in this disease, to which, among English workers on the subject, Dr. W. Hunter has especially called attention.—*B.M.J.* W.H.P.

Public Health and Hygiene.

MONTHLY REPORT OF DEATHS FROM CONTAGIOUS DISEASE IN ONTARIO FOR DECEMBER, 1896.

PREPARED BY P. H. BRYCE, DEPUTY REGISTRAR-GENERAL.

		Total Reported.	Per cent. of Whole Reported.
Total population of Province	2,233,117	1,546,598	70
" Municipalities	745	559	75
" Cities	13	13	100
" Towns and Villages	236	176	74
" Townships	496	370	74

VARIOUS DISEASES REPORTED.

Municipality.	Pop. Reported	Typhoid.		Diphtheria.		Scarlatina.		Tub'rcul'sis	
		Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum
Cities	429,000	14	0.3	45	1.2	4	0.1	65	1.8
Towns and Villages	313,523	8	0.3	22	0.8	0	..	28	1.0
Townships	804,075	13	0.1	22	0.3	2	0.3	40	0.6
Total Pop. Reported	1,546,598	35	0.2	89	0.6	6	0.4	133	1.12

Public Health and Vital Statistics.

The departments of Public Health and Vital Statistics in Ontario have been placed under the charge of Hon. E. J. Davis Provincial Secretary. The first quarterly meeting of the Provincial Board of Health for the current year will be called for February 10th. An important report will be presented by the Committee on Ventilation. J. J. C.

Proceedings of Societies.

THE TORONTO MEDICAL SOCIETY.

The regular meeting of this Society was held in the Council buildings on the evening of the 7th of January. Dr. W. J. Wilson presided.

The minutes of the previous meeting were read and adopted.

Dr. G. A. Peters read a paper on "Procidentia Recti." The paper began with a discussion of why and how this condition, a normal phenomenon, occurs in the horse. The points of difference between prolapse and procidentia were referred to. He then gave a classification of the forms of the latter condition, according to Allingham. Water color drawings were shown which illustrated the various forms. Authorities differed as to the age at which this condition was most usually found. The various causes were then given and methods of cure, both palliative and radical, were detailed. The history of a case treated by the essayist was read. The patient was a boy aged two years and seven months, admitted to the Victoria Hospital for Sick Children in September, 1896. The anterior wall of the abdomen below the umbilicus was wanting, there being ectopia vesicæ. The symphysis pubis was also absent. The doctor described the anomalous condition of the genitalia. The posterior wall of the bladder bulged forward as a florid fungating mass, irregular in shape. It was ulcerated in parts, and very tender and sensitive. The mother said that the child had always strained severely when the bowels moved. Prolapse was noticed about eighteen months ago. When first observed the bowel came down only one inch. The protrusion rapidly increased in size and came down with each evacuation. At first it was easily returned, but soon refused to remain reduced. It had been down almost continuously for one year. When the child lay quiet the protrusion measured about four inches in length, but when it cried it reached eight inches below the anal ring. It had the shape of a truncated cone. In the quiescent state the color was pinkish, but during straining or if exposed to the air it became purplish. There were a few spots of ulceration on its surface; some sloughs also. There was a small depression just external to the external sphincter. There was great pain and straining when the bowels moved, the child showing the most intense agony.

Before referring to the particular treatment used in this case the doctor referred to the treatment of prolapse and procidentia in general. In prolapsus recti, any cause should be removed—such as pin-worms, stone, phimosis. The child should be made to stand or lie down when the bowels moved. If the bowel protruded the application of cold or astringents was useful. In the severer forms applications of strong nitric acid should be made, the patient being anæsthetized.

The treatment of procidentia was more serious. Many cases were intractable and incurable. Sometimes the nitric acid treatment would effect a cure. Astringents should be avoided and injections into the tissues around the perineum should not be made. One surgical procedure was to remove elliptical or triangular portions of the mucous membrane and stitch the edges together with catgut or horsehair. Another process was to remove such pieces with the clamp and cautery. Another procedure described was that of removing the whole mass by means of an elastic ligature. The ligature was applied a short distance from the anus, made tight enough to shut off the circulation. An incision was then made into the perineal sac and any hernial protrusion reduced, the incision being made on the distal side of the ligature. Having reduced the protrusion, the ligature should be tightened. Next a canula is introduced from before backward through the whole mass on the outside of the ligature. Each half of the bowel can then be tied off by an elastic ligature, leaving the end to slough off. The method adopted by Treves was to dissect off the mucous membrane and stitch the edges to the skin. This had met with a good deal of favor. Lange's method, in which the coccyx is removed, was described and commented upon. Another method was to open the abdomen anteriorly and stitch the rectum after it had been drawn up to the abdominal wall. The method employed in the case reported was to make an anterior abdominal incision, draw up the rectum, narrow the intussuscipiens by stitching so that two lines (longitudinal) on the bowel would be approximated and thus make a fold, the sutures being left long and subsequently stitched through the anterior abdominal wall, thus suspending the rectum. So far, some three weeks, the patient had done well.

Dr. John Hunter spoke of the value of a mixture containing magnesium sulphate, morphia and aromatic sulphuric acid in cases of prolapse.

Dr. H. B. Anderson related the history of a case which had

come under his observation in which the cautery had been used. A good recovery followed. Dr. Anderson discussed some other points in the paper.

Dr. H. B. Anderson presented a tubercular testicle for examination. The specimen showed an involvement of the epididymis and cord.

Dr. W. J. Wilson presented for Dr. Hay a surgical kidney and its mate which was acutely congested. The specimens were from a young woman aged twenty. She consulted her physician for irritability of the bladder at first. A time after she was attacked with a sudden pain in the region of the left kidney. Became feverish ; was put to bed, and never was up afterward. Examination revealed an enlargement in the region of the pain, and cystoscopic examination showed pus oozing from a ureter. Death subsequently ensued.

Dr. William Oldright read a few notes on some points in midwifery practice. He made it a point always to examine the urine of the patient he was asked to attend in confinement. He would call the patient's attention to any vaginal discharges and emphasize the necessity of frequent cleansings. It was important to secure an intelligent nurse; this the doctor should superintend; if not, very often he would find one employed who had no idea of asepsis. The introduction of the hand prior to the application of the forceps to dilate the vaginal outlet was a useful device; in this way the time of descent of the head would be greatly lessened. Care should be taken to apply the forceps in such a way as not to impinge on the face. Due deliberation should be observed in this important procedure. The position should be noted, so as to avoid delivery of the face to the pubes, as was often done, time not being allowed for turning to take place. In version one should not be particular to secure both feet, as one was enough. The speaker advised a plan he uses to support the perineum, viz., with both hands around the orifice, at the same time the head may be directed in such a way as to avoid undue stretching of the weak places. Another important point was to determine after expulsion of the placenta whether any membranous shreds were left in ; this would often save hours of painful waiting for oozings of blood to cease. In a case reported the speaker said that after eight days of normal convalescence the temperature rose to 104, with other symptoms of sepsis. After the use of a blunt curette and irrigation with an antiseptic solution, patient did well.

Dr. Oakley said that under the teaching of Meggs, who held that meddlesome midwifery was bad midwifery, he believed he had erred in being too cautious in leaving the progress of labor in many cases in his earlier practice too much to nature. He thought it was better to err on the side of boldness rather than to wait too long for delivery to take place. He said that it required a great deal of thought to perform Crede's method of expelling the placenta properly. In his early practice he used to make traction on the cord. He believed a good many of the older men had done the same. It was probably wisest on the whole to allow the placenta its own time to come away. He had been taught to apply a folded napkin to the perineum while the head was coming down. This, however, tended rather to laceration than preservation. Better, he believed to introduce the four fingers of one hand between the coccyx and the rectum and press downward and forward, using the other hand to bring the head down under the symphysis. It was important to keep the head well flexed. As to cutting the cord, it was his custom to wait until it was flaccid. He thought the use of ergot in the third stage was of benefit, and should not be given before.

Dr. G. A. Fletcher asked as to the advisability of attending to lacerations of the cervix immediately after labor. He had observed this lesion in two cases. Instead of anæsthetizing under chloroform to do perineal repair, he had found local obtunding with cocaine did very well.

The President, referring to the necessity of inquiring into the matter of who the nurse was, related a case of puerperal sepsis with death where the nurse employed was a neighbor woman, who had only a short time before recovered from the same disease. He had had a child die from hæmorrhage. The other children of the family had been handling it somewhat roughly, and had drawn off the cord. He had taken the precaution recommended by the first speaker of tying the ligature a second time. The matter of after-douching in normal cases was perhaps unnecessary. He had often found that the blood serum was a normal disinfectant. As to the use of uterine stimulants in the early stages, he had found quinine and wine of ipecac of decided value. He would not recommend ergot.

Dr. Oldright closed the discussion.

J. N. E. B.

THE CHATHAM MEDICAL AND SURGICAL SOCIETY.

The regular monthly meeting was held January 14th, 1897, the President, Dr. Duncan, in the chair.

Dr. Charteris read the paper of the evening, on "Osteo-Sarcoma," with history of a case. The paper first drew attention to the extreme malignancy of sarcoma, the inefficacy of all medicinal treatment, the only hope of preventing a fatal termination being a radical surgical procedure, and, after shortly discussing the different varieties of sarcoma, gave a description of the following very interesting case :

W. W., aged nineteen, excellent family history. At the age of thirteen was kicked on the left thigh by a horse, causing at the time some soreness and swelling which, however, quickly subsided. Two years subsequently he began to suffer slight pain at the seat of the former injury. At first little attention was paid to the symptom, it being attributed to "growing pains," as the lad was apparently in perfect health. After a time the pain increased in severity, at the same time a slight enlargement on the thigh was observed, and he began to lose flesh, and suffered also from slight chills and fever. Dr. C. inserted an exploring needle with negative results, thinking possibly it might be chronic inflammation of the bone. The tumor continued to grow more rapidly, became very hard, and the doctor concluded it must be a sarcomatous growth, and after a consultation amputation at the hip joint was advised. The parents demurred for a time, but the tumor continuing to grow, and as the boy was rapidly losing flesh and strength, amputation was consented to. Wyeth's method was adopted, with the loss of but little blood. In seventeen days after the operation he left the hospital and returned home, the wound healing by first intention without the formation of a drop of pus. He recruited rapidly, and was soon enjoying perfect health again. The operation was performed in September, 1892, and the patient a month month ago weighed 165 pounds and stood six feet high. His health during the four years since the operation has been excellent. There was no sign of any reappearance of the disease until October, 1896, when he noticed a small lump on the right side of his head ; it was not tender, and he suffered no pain from it. Dr. C. did not see him, however, until December last, when, on

examining the growth, and knowing the previous history of the young man, he advised its removal at once. A horse-shoe shaped incision was made around the base of the tumor, the flap reflected and the tumor carefully removed from the bone, which was thoroughly scraped and chiselled. Spicula of bone were found penetrating the tumor. The wound healed at once, and up to the present—one month since the operation—there has been no return of the growth. Dr. Charteris presented photographs of the patient before and after the first operation, and a longitudinal section of the growth: also the tumor removed from the head.

Dr. Holmes—No surgical subject demanded more careful attention. If allowed to run its natural course the termination was always fatal. The early diagnosis was often difficult, yet most important: attacks all ages: more apt to occur in early life than the carcinomata. The two principal forms of the sarcomata which attack long bones are known as the central and subperiosteal—the one presented is one of the latter kind. Dr. Holmes gave short histories of several cases under his care at various times.

Dr. Rutherford—Fortunately it was a rare disease. He had had three cases: in one the original growth developed from the spinal column: another in the abdomen, probably from the pelvis, and the third on the tibia. All three were rapidly fatal, notwithstanding that in the last case amputation was resorted to early: metastatic deposits rapidly grew in various parts of the body.

Dr. Duncan asked if any members of the Society had any experience with iodide of potash in sarcoma. He had been advised to use it. Also, whether opium had the same influence in retarding the growth and development of sarcomata as it apparently frequently had in the carcinomata.

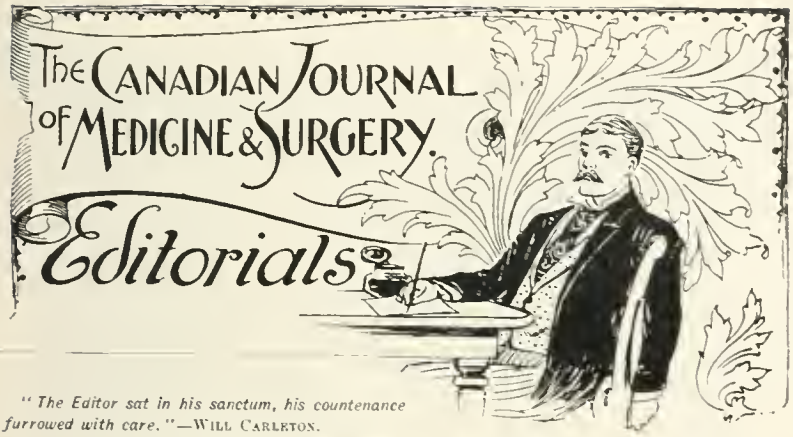
Dr. McKeough—The case related is an exception to Volkman's three-year limit, and proves that it is not always safe to regard as cured those cases which after the expiration of three years show good health. Still he thought it was a victory for surgery, as the young man had over four years of perfect health before a return occurred. He related a case in which the superior maxilla was removed five years ago from a lad for a large sarcoma, and at present there were no signs of a recurrence. In his experience opium did not have the same retarding influence in these growths as it had in carcinoma, and in one case in which the diagnosis was obscure, with a possible specific causation, the patient was saturated with potassium iodide without any benefit, the post mortem revealing undoubted round-cell sarcoma.

Dr. Charteris briefly replied, thanking the members present for taking so much interest in the paper and subject.

Under the head of "Pathological Specimens," Dr. Holmes presented a carious sacrum with the following history: The patient was a young man, aged twenty-four years. Had good health until about a year ago, when he was said to have had typhoid fever. The fever continued longer than usual, but eventually left him. He returned to work, but was never well. In August last he was compelled to give up work through weakness. In October he suffered much pain in the lower part of back, which radiated towards the right hip, and had fever. An abscess finally pointed in the gluteal region, about midway between the sacrum and great trochanter, which was opened, but the fever continued, the temperature frequently reaching 104° F.; the discharge was very offensive, and the patient was greatly prostrated. Dr. Holmes saw the patient in this condition, and under ether explored the sinus, which he found extended in different directions; the main channels passed into the pelvis between the sacrum and the rectum, where dead bone could be felt: the patient being very weak, a drainage tube was inserted, hoping that proper drainage would improve his condition. The patient did rally for a short time, fever was less, and appetite improved, and by the use of a solution of formaline the odor became much less offensive. The fever, however, returned as high as ever, and in hopes of improving the drainage a counter opening was made on the opposite side of the sacrum, and the tube passed through. The condition of the patient did not improve, and he gradually sank and died. The specimen exhibited showed a large carious spot on the anterior surface of the third sacral vertebra, involving the cancellous tissue of all the bodies of the sacral vertebra above. G. T. McK.

Vessel for Invalids.

It is said that an English steamship company is about to build a vessel which will be for the "sole use of invalids." The steamship is to be fitted up very luxuriously and devoted entirely to the service of wealthy sufferers who are afflicted with pulmonary troubles. An eminent corps of medical men will be on board, and the cuisine will be in charge of chefs trained to the delicate taste of ministering to the refined and capricious tastes of invalids.—*Chicago Record.*



"The Editor sat in his sanctum, his countenance furrowed with care."—Will Carleton.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

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VOL. I. TORONTO, FEBRUARY, 1897. NO. 2.

CANADIAN NURSES IN THE UNITED STATES.

As OUR readers are doubtless aware, an Act was approved in 1885, "prohibiting the importation and immigration of foreigners and aliens under contract or agreement to perform labor in the United States, its territories, and the District of Columbia." The provisions for excluding aliens did not apply, among others, "to actors, artists,

lecturers, or singers, nor to persons employed strictly as personal or domestic servants." This last section was amended by an Act, passed in 1891, providing that the exclusion did not apply "to ministers of any religious denomination, nor persons belonging to any *recognized profession*, nor professors for colleges and seminaries."

Attention has been attracted to the status of Canadian nurses employed in the United States, some contending that, as nursing is a recognized profession, they ought to be exempt; others, that nursing is not a profession, and that, therefore, Canadian nurses immigrating to the United States are liable to deportation.

Desirous of obtaining exact information on this subject, we wrote to the Commissioner of Immigration, Ellis Island, New York Harbor, Mr. D. J. H. Senner, who promptly and courteously replied, sending copies of the laws relating to the immigration of aliens to the United States. For a reply to a question asked, "What action, if any, has been taken by the American Government relative to the deporting of Canadian nurses?" he referred us to Inspector of Immigration, J. R. DeBarry, of Buffalo, N.Y. A letter was then sent to Mr. DeBarry, requesting information as to what decision had been arrived at by the American Government relative to the status of the Canadian nurse, whether she immigrates under contract or simply asks for employment after her arrival in the States. The following is Mr. DeBarry's reply:

"Treasury Department,
"U. S. Immigration Service,
"Buffalo, N.Y., January 12th, 1897.

"*Editor Canadian Journal of Medicine and Surgery, Toronto:*

"Sir,—The Commissioner of Immigation at New York having referred you to me for information on the subject of your letter of the 9th inst., I beg to say that, as nurses do not belong to a 'recognized profession,' they can *not* come under contract to 'labor' or 'perform a service of any kind' in the United States. Laws of 1885 and 1891.

"The same laws place the medical and surgical fraternity in a higher sphere, i.e., 'members of a recognized profession,' therefore they may come under contract and engage in their professional calling.

"There are no laws against Canadian nurses other than the laws affecting subjects of all nations, so there is no law forbidding a Canadian nurse immigrating to the United States, and when domiciled here she may present herself to any private family or hospital, and, if accepted, can enter into contract with the person or hospital desiring her services. 'Soliciting or encouraging the migration of aliens to enter the United States to perform labor or service of any kind' is a violation of law, and the penalty is $1,000 and costs in each case, *no less*.

"The decision you refer to was rendered on the 10th day of December, 1896, and had reference to five *special* cases at Dansville, N.Y. I am, sir,

"Very respectfully,

"JOHN R. DEBARRY,

"*Inspector of Immigration.*"

This is sufficiently explicit. In the United States, a nurse, whatever her attainments may be, is not considered by the Government of the country as belonging to a recognized profession.

We think that Canadian nurses ought, through the agency of the National Council of Women, to represent to their American sisters the inferior grade to which the art of nursing has, apparently, sunk in public estimation in the United States. They should also seek to obtain from the American Government a decision which will place nurses, who have obtained a diploma from a good training school, in at least as favorable a position before the law as actors, artists, lecturers and singers. J. J. C.

THE TORONTO GENERAL HOSPITAL TRAINING SCHOOL FOR NURSES.

THIS valuable institution, which has been in operation since April, 1881, has granted certificates, up to October, 1896, to 251 nurses. Of these, a large number hold positions in the hospital, some are married, six are foreign missionaries, and many are engaged in private nursing both in Canada and the United States. At present, nurses are required to pass an entrance examination consisting of ordinary English and practical work: a written examination at the end of the first and second year, set by the Superintendent of

the School, and at the end of the third year a written and an oral examination before an examining board.

The School is controlled by the trustees of the hospital, the Medical Superintendent having the general supervision, and the Superintendent of the School immediate charge of the nursing, lectures, discipline and instruction.

Over six hundred applications are received every year. Selections are made from these to the number of about thirty. These are admitted, and if found satisfactory during the period of probation (two months) are enrolled as pupil nurses. During the period of probation nurses are boarded and lodged at the expense of the hospital, but receive no other compensation. Pupil nurses are expected to perform any duty assigned to them either as nurses in the hospital or when sent to private cases among the rich or poor in any part of the Province. Nurses when sent out will not be entitled to any extra payment for such service, nor to receive any perquisite or gratuity without the sanction of the Lady Superintendent, their regular pay with their education being considered a full equivalent.

When not engaged in the hospital, nurses live in their own residence, which is called "The Home." This residence affords accommodation for sixty pupils. The parlors are bright and homelike; a piano, a good library, and a large number of monthly and weekly periodicals furnish means of relaxation when the hours of duty are over.

Each nurse on duty is allowed one hour in the afternoon for rest, besides meal-time, also an afternoon each week, and one-half of Sunday, except in emergencies. A holiday of two weeks the first year, three weeks the second year, and four weeks the third year, is also allowed.

The facilities for obtaining a good training are large. The hospital has four hundred beds for patients. In addition to the numerous medical, surgical, eye and ear, nose and throat wards, there is also a pavilion, containing forty beds, set apart for gynæcological work, while a maternity pavilion, containing twenty-eight beds, known as the Burnside Lying-in Hospital, affords thorough training in obstetrical nursing. The practical knowledge obtained in the wards is supplemented by a regular course of study and lectures extending over nine months in each year.

The course comprises elementary anatomy, physiology and hygiene, with lectures given by members of the hospital staff on

a number of subjects calculated to make the nurses more intelligent and efficient.

We deem it only our duty to say that not the least claim of Toronto General Hospital on the grateful recognition of the public is the very efficient work done by the Medical Superintendent, Dr. O'Reilly, and the Lady Superintendent, Miss Snively, in conducting this large and flourishing training school for nurses. J. J. C.

THE POSSIBILITIES OF THE X-RAYS.

We are pleased to learn that an enterprising city confrere has, by actual experiment, powerfully assisted in dispelling the extravagant prophecies which had been indulged in by many persons to the effect that the X-rays could be used so as to restore sight to the blind. The *Globe* says: "The apparatus used in the test was in every respect the most modern. The strength of penetration of the X-rays from the tube was such that the bones of the hand were easily seen at a distance of ten feet and through a closed door. The same day it penetrated through the thickness of two city directories, showing metal objects behind them. The test was made with and without the fluoroscope. The result of the test was, however, most disappointing to those mainly interested, namely, the blind. It was clearly proved that the X-rays are not effective for the purpose of making the blind see. The test was a most thorough one, the sixteen subjects ranging in age from fifteen to fifty years, of both sexes, and representing every degree of the malady from total blindness to partial sight."

While the effort to apply the X-ray to the relief of blindness has resulted in failure, the new discovery will, it is to be hoped, prove of great service in clinical medicine, and more particularly in surgery. As we said in last month's issue, clinical medicine draws its sustenance through many roots in numberless fields. One of the more recent discoveries in bacteriology, namely, the Widal reaction, gives a precision to the diagnosis of typhoid fever which up to the present time has been unattainable. As further improvements in electricity develop we may hope to obtain good photographs of the heart, kidneys and other viscera, which, when examined with the X-rays, appear merely as shadows. With the X-rays, surgeons are now able to make a very exact diagnosis in cases of disease of the

bones, which formerly they were obliged to leave very much to conjecture. In fractures, an X-ray photograph can now be taken through the splints, showing the exact position of the injured parts.

Now that a private physician has led the way in this city, we hope to see a new department of electrical photography created in our city hospitals. Surgeons, before performing important operations on the bones, or when searching for foreign bodies, should leave nothing to surmise; no guess-work should be permitted. Science may fairly demand that no amputation shall be done until, among other information, ocular evidence is given that the injured bone cannot be saved. J. J. C.

HARD TIMES AND HYGIENE REDUCE THE SICKNESS RATE.

It is a matter of everyday observation among Toronto physicians that the percentage of sickness has of late been very much reduced. Even dispensing druggists are willing to admit that "business is quiet," and this remark applies to the sale of patent medicines as well as original and pirated compounds. About one hundred beds are vacant at the Toronto General Hospital; and the average lodge physician is astonished at the amount of rest he obtains both day and night. The cause of the complaint is said to be "hard times." Still this omnipresent condition, which the physician recognizes as clearly as his neighbor, surely does not make the air more healthful and does not affect the development of microbes. A reasonable explanation of the hard times theory of exemption from sickness is that a long, strong dose of misfortune is either a powerful tonic to the brain and nervous system, or a depressing influence which leads the way to despair and suicide. That suicide has increased of late is true. The converse of the proposition, that misfortune is curative or preventive of disease, should be true also.

That poverty and distress prevail in Toronto is easily seen. The faces of the people, which to the looker-on are true indices of the color of their lives, are grave; smiles are rare, except where children play. People are thinking earnestly of their position, striving to escape from dangers of debt or loss of property. They have no time to think of trifles. They can no more afford to be sick for a trifle than a man, alone on a raft in mid-ocean, can find time to devote his attention to a phlegmon on his foot. The derelict feels

pain, after a fashion: but he is struggling for his life and pays no attention to trifles.

Then men avoid the sources of disease. They cannot afford to wine and dine, and even if they can, they do not indulge in these pastimes as freely as in former years. A perusal of the descriptions of certain notable banquets given of late in Toronto will show that the attendance was small, although the attractions were in some instances great.

The ladies also, who are generally the most frequent sufferers, have to turn to their female friends for consolation: but, worse luck! since the athletic era for women began, it is no longer the correct thing to be sick. Ladies do not respond as readily to the plaint of a sister's woe as formerly; the inevitable bicycle is recommended, enforced by convincing example, and except the case calls for operative procedures, many fair patients get rid of their disorders simply by continuing to exist in a healthful physical and mental environment. Then in many cases they begin to think intently about somebody or something other than themselves or their immediate concerns—how John is going to keep on paying that heavy life insurance premium; how Lily is going to survive since her ne'er-do-well husband has fled to the States; how Herbert is going to secure that situation, etc.

As to the young folks, thanks largely to the good stock from which they spring, and abundance of cheap nourishing food, young Torontonians, when free from infectious diseases, are a healthy generation. That infectious diseases are powerfully repressed the school history of the last year can attest, and every Toronto physician knows.

These reasons, therefore—the divergence of thought from self to intensely interesting ulterior objects, clean living, and the practice of civic and domestic hygiene, are explanations of a state of affairs which most of us have occasion to note—a visible falling off in patients and a notable reduction in revenue. J. J. C.

"SURGERY WITHOUT ANÆSTHETICS."

The recent gathering of distinguished members of the medical profession and others at Boston, at the celebration of the fiftieth anniversary of the first administration of ether in a surgical operation, at which such tribute to Drs. W. T. G. Martin and

John C. Warren was paid, was indeed a most memorable one. After Dr. Ashhurst had finished his paper, which appears under "Surgery" in this issue of the JOURNAL, Dr. David W. Cheever, of Boston, dilated upon what anæsthesia had done for surgery, adding, "Apart from the benefits to the patient, avoidance of mental as well as physical shock, it is a benefit to the surgeon in that his moral fibre is less strained and judicial callousness is no longer called for: he need not steel his heart, for his victim does not feel." Dr. John P. Reynold, of Boston, told of the benefits of anæsthesia to women in labor. Dr. William T. Welch, of Baltimore, referred to the benefits to be derived in experimental medicine from vivisection of animals. Dr. Charles McBurney, of New York, read a splendid paper on "The Surgery of the Future."

The programme had upon it as its last item a poem on "The Birth and Death of Pain," by Dr. S. Weir Mitchell, of Philadelphia, paying therein a tribute to Oliver Wendell Holmes:

> "Forgive a moment, if a friend's regret
> Delay the task your honoring kindness set.
> I miss one face to all men ever dear;
> I miss one voice that all men loved to hear.
> How glad were I to sit with you apart,
> Could the dead master use his higher art
> To lift on wings of ever lightsome mirth
> The burdened Muse above the dust of earth,
> To stamp with jests the heavy ore of thought,
> To give a day with proud remembrance fraught,
> The vital pathos of that Holmes-spun art
> Which knew so well to reach the common heart.
> Alas! for me, for you, that fatal hour!
> Gone is the master! Ah! not mine the power
> To gild with jests that almost with a tear
> The thronging memories that are with us here."

Among those present at the Jubilee celebration were Dr. J. Collins Warren, presiding, a grandson of Dr. John C. Warren, whose courage permitted the experiment of the first administration of ether for anæsthetic purposes fifty years ago: Mr. Charles H. Dalton, President of the Massachusetts General Hospital, who delivered the address of welcome: and Dr. Robert T. Davis, of Fall River, who was a student and eye-witness of Dr. W. T. G. Morton's first operation, and who gave a brief account of the steps of the operation.

Lord and Lady Playfair, of London, were present, as also the widow, son and daughter of the late Dr. Morton. Over and above those more distinguished guests, there was a very large number of physicians present from all parts of the continent.

W. A. Y.

WHO WILL IT BE?

As we read almost daily, in this age of study and onward progress, of some new discovery, be it a new bacillus, or how to change the color of a prima donna's eyes, the question comes to us,—will a genuine *cure* for that "seal of death," phthisis, ever be discovered. True, by change of climate, nourishment properly administered, and careful treatment, the pain and distress of the patient may be relieved; and in a few instances (if the disease be not hereditary) cured. But as the physician diagnoses the case, and in all honesty tells the name of the dread disease to the friends of the patient, in at least five cases out of ten the answer comes, "Yes, consumption is hereditary in our family." In the name of humanity let all physicians try, as much as it in their power lies, to advise and warn against marriage, all over whom this dread sword of Damocles hangs, ready to smite at the first chill blast. There came recently under the writer's notice a case in which an educated married lady, whose constitution was undermined by hereditary consumption, had already borne a child, and was soon again to become a mother. As she put it, "just to prolong her own life, she really did not want the children particularly." Such a crime against innocent childhood! Surely such cases are rare: a physician is not a sentimentalist, he must be made of sterner clay: but he is a man, and such a statement as the one quoted is enough to make even the stoutest heart quail, and make physicians feel it to be a duty to advise against motherhood and fatherhood, all who are prone to this awful disease. Often medical men say, "The profession is over-crowded." No, it is not: for we still stand where our fathers stood and ask, How shall we *cure* phthisis? We reverently bow the knee of homage and give to the Jenner, the Simpson and the Koch, of yesterday, the thanks and admiration of a world for what they did to alleviate the suffering of humanity. But we still look anxiously for the man who will give to the world a *cure* for this dread malady, and add to the ranks of our noble profession a hero.

> "I want a hero, an uncommon want,
> When every year and month sends forth a new one."

W. A. Y.

LECTURESHIP ON ANÆSTHETICS.

THE following notice appeared lately in the *Philadelphia Polyclinic:*

"Dr. W. Oakley Hermance has been appointed instructor in the administration of anæsthetics in the Philadelphia Polyclinic, and anæsthetizer to the Polyclinic Hospital. The faculty and trustees recognize the growing sentiment among the profession that the administration of anæsthetics should be entrusted to skilled hands only, and in providing for proper instruction of the incoming residents of the hospital, they at the same time afford an opportunity to the pupils of the college to gain similar knowledge and experience."

At last we have it. The appointment of a lecturer on how anæsthetics should be administered is certainly a great step in advance. There is no duty which a physician has to perform which requires such care and attention as the administration of ether or chloroform, and in these days of advancing surgery it would prove a perfect boon to the student to have, even during his last year at college and just before he obtains his diploma, a course of lectures on this subject, where he would be taught just what precautions should be exercised in this regard. We hope that it will not be long before this worthy example will be followed in our own country, so that it will not be necessary for the student to get the knowledge in a post-graduate or polyclinic school, which he ought to have obtained before his graduation. W. A. Y.

MANY THANKS!

WE have already received over thirty replies to a typewritten letter, addressed to the prominent medical journals of the United States and Canada, and sent by concurrent mail, with a copy of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY. The writers all express kind wishes for our success, and agree to exchange with us. We have also heard complimentary remarks, and have received by letter, favorable notices on the typographical appearance and literary quality of our journal.

We are much indebted to our confreres of the medical press for their kindly expressions. By devoting both time and study to the

editing of this journal, we shall endeavor to retain their good will, and hope, in the not distant future, to earn the cordial approval of the medical profession at home and abroad. J. J. C.

ACCESSIONS TO OUR STAFF.

It is with great pleasure that we welcome to the ranks of our editorial staff Dr. Thomas H. Manley, Professor of General Surgery in the New York School of Clinical Medicine. Dr. Manley is visiting surgeon to Harlem Hospital, consulting surgeon to Fordham Hospital, and Hospital for the Aged, Yonkers; Vice-President of the National Association of Railway Surgeons, a member of the New York Academy of Medicine, and many other city, county and national medical societies. His monographs on "Hernia" and "Local Anæsthetics" are well-known to Canadian readers. Dr. Manley will take charge of the department of Surgical Pathology in The Canadian Journal of Medicine and Surgery.

Drs. B. E. McKenzie and H. P. H. Galloway, both well-known orthopedic surgeons, have kindly consented to look after the department of Orthopedic Surgery. J. J. C.

FOOD TABLETS.

Not long ago an American chemist, evidently a disciple of Prof. Berthelot, of France, stated that the time was near at hand when hot water and food tablets would be the sole accoutrements of a kitchen; that the essential food elements of a twelve-hundred pound steer can be put into an ordinary pill-box, and that a single concentrated soup tablet the size of a pea will make a large bowl of soup full of nourishing strength. A ration case weighing eight ounces was planned. It contained the following supply: Three tablets of concentrated soups, equal to three quarts; four beef tablets, equal to six pounds of the meat; one milk tablet, equal to one pint; two tablets wheaten grits, equal to two pounds; one tablet egg food, equal to twelve eggs.

Viewed from a chemical standpoint, it may seem possible to reduce, by condensation, the bulk of man's food almost indefinitely, and thus furnish in a thoroughly portable and convenient form nutriment for the body which will remain unchanged through long

periods of time and in spite of the influence of varying conditions of temperature and climate; but from a physiological point of view may be seen serious obstacles to the successful consummation of such a proposition. That condensed and concentrated foods have a direct sphere of usefulness will not be denied, but that food tablets and similar products are well adapted to constitute the sole food of healthy men for any length of time is an undeniable fallacy. Combined with fresh foods they may yet prove of service for, like the particles of yeast added to the dough, the necessary principle contained in the ordinary food may leaven the whole lump.

But practical experimental evidence is always most convincing, and hence we append the following despatch which recently appeared in a reliable periodical: "A despatch from Denver was published stating that the troops at Fort Logan have made the first test of the new emergency ration. One company went out for three days of forced marching in the foothills of Denver, loaded with coffee tablets and compressed soup that was supposed to contain all the advantages of hard tack and coffee. On the night of September 11th, the medical officer charged with weighing and watching the men rode into Morrison for assistance. He reported that thirty-six out of the fifty men are down with griping pains resulting from the non-assimilation of the scientific ration. The order could not be revoked, and the men in the field were informed that they would have to remain on the march for two days longer."—*Dietetic and Hygienic Gazette.* W. A. Y.

The Gynæcologist Himself.

It seems to me that no physician with hands above medium size should attempt to practise gynæcology. Of course no physician can be blamed if he has unusually large hands, but it is a misfortune that should debar him from attempting to practise a branch of the profession when a small or medium-sized hand and a light and sensitive touch are among the requirements that are almost indispensable. The gynæcologist, of course, should thoroughly understand his business first of all, and should always know what he is about to do, and why, thereby inspiring the confidence without which success is very problematical in any branch of the profession.—*New York State Medical Reporter.* W. A. Y.

THE MODERN TREATMENT OF DIPHTHERIA.

Dr. Edwin Rosenthal, of Philadelphia, who has had large experience during the past two years in the treatment of diphtheria by antitoxin, in the *Medical World* of December last gives a resumé of his work in this direction. He says that his cases were sometimes mild, and at other times of a very severe laryngeal variety requiring intubation, but adds that he found they never recovered so quickly as under the antitoxin. He classifies the cases as follows:

Whole number treated	141
Number of deaths	6
Mortality	4⅓%
Faucial	86
Laryngeal	55

FAUCIAL VARIETY.

Tonsils	68
Pharynx and tonsils	14
Nasal	3
Pharynx	1
	86

LARYNGEAL VARIETY.

Laryngeal	18
Tonsils and laryngeal	22
Pharynx, tonsils and laryngeal	8
Nasal, pharynx, tonsils and laryngeal	4
Pharynx and laryngeal	3
	55

Of the 55 laryngeal cases, 5 died; 24 required intubation, of which 2 died. The result of the laryngeal cases shows conclusively the value of the antitoxin. The doctor is strongly of the opinion that the earlier the antitoxin is used the better. In 128 cases he used the serum on or before the fourth day. To show the results of his cases, Dr. Rosenthal quotes from his laryngeal cases: Intubated before antitoxin, 100 cases: 62 died—a mortality of 62 per cent. Since antitoxin, 24 cases; 2 died—mortality of 8⅓ per cent. The doctor goes on to show the therapeutical effect of the antitoxin on the various organs of the body, its lowering effect on the pulse rate, rapid decline in temperature, its sometimes wonderful effect on the diphtheritic membrane (a line of demarcation forming between the healthy and diseased mucous membranes). In laryngeal cases, when the antitoxin is used early, there is seldom any need of

intubation or tracheotomy; and when intubated the tube can be withdrawn in a much shorter time than heretofore. Antitoxin has conspicuously proved its action in shortening the course of the disease.

Dr. Rosenthal gives it as his opinion that the employment of a concentrated serum permits the injection of smaller amounts of substances other than antitoxin: diminishes the metabolic effect said to be produced by a large amount of foreign serum upon the blood: lessens the dread of injection since we can now employ smaller syringes: permits of larger doses where necessary, and insures more rapid absorption, and more prompt results may be expected. Dr. Rosenthal speaks of the great value of antitoxin (having used Mulford's exclusively during the past year) to produce immunity against diphtheria. In over six hundred cases immunized by him not one showed symptoms of diphtheria, although in many cases isolation could not be carried out, patients having frequently lived in the same room with those affected.

W. A. Y.

In the Clinics.

At the Toronto General Hospital the Esmarch bandage is no longer used in amputations, digital compression of the blood vessels being found sufficient. The principal objection to the bloodless method is that by compressing the capillaries too much it seriously interferes with the local circulation, and thereby injures the nutrition of the stump. Surgeons in the rural districts who may not be able to secure skilled assistants at amputations will probably continue to use the Esmarch bandage, taking the precaution of not leaving it on the limb too long.

Pamphlet No. 1, 1896, on "Meat and Milk Inspection," containing the Act providing for the inspection of meat and milk supplies of cities and towns: plans and estimate of cost of a municipal abattoir, and regulations of the Provincial Board of Health regarding the same: also report on inspection of meat and milk, and regulations relating thereto, has been issued by Provincial Board of Health of Ontario. Toronto: Warwick Bros. & Rutter, printers, bookbinders, etc., Front Street West. 1896.

The Physician's Library.

Autoscopy of the Larynx and the Trachea. By Alfred Kirstein M.D., Berlin. Authorized translation by Max Thorner, A.M., M.D., Cincinnati, O., Professor of Clinical Laryngology and Otology, Cincinnati College of Medicine and Surgery. With twelve illustrations. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street: Toronto: A. P. Watts & Co., College Street, Canadian Agents.

This interesting monograph lays before the profession a method of examining the interior of the laryngeal chamber without resorting to the use of the laryngoscope.

The Surgery of the Chest. By Stephen Paget, M.A.Oxon., F.R.C.S., Surgeon to the West London Hospital, and to the Metropolitan Hospital. Illustrated. New York: E. B. Treat, 5 Cooper Union; Bristol, Eng.: John Wright & Co.: Montreal: J. Hood Company. 1897.

There has never yet been written a work on the whole subject of the surgery of the chest, both in injury and disease; and now that this important branch has been taken up by a surgeon as prominent as Mr. Paget, especially at a time when we seem to have reached a degree of excellence in our art beyond which on our present lines we cannot advance much farther, it will be received with pleasure. The subject is presented clearly and fairly, and presents those rules which are most likely to help the surgeon in the difficulties of practice.

Anomalies and Curiosities of Medicine, being an Encyclopaedic Collection of Rare and Extraordinary Cases, and of the most Striking Instances of Abnormality in all branches of Medicine and Surgery, derived from an Exhaustive Research of Medical Literature from its Origin to the Present Day. Abstracted, classified, annotated and indexed by Geo. M. Gould, A.M., M.D., and Walter L. Pyle, A.M., M.D. With 295 illustrations in the text, and twelve half-tone and colored plates. Philadelphia: W. B. Saunders. 1897.

Here is a book discussing a subject in medicine, certainly out of the ordinary. To man, the anomalous and the curious are of excep-

tional interest, especially so of the construction and functions of the human body. Any work taking up a subject in as thorough and able a manner as Drs. Gould and Pyle have done in this instance will certainly meet with the heartiest support from the profession, as there must be an exceepingly small percentage of men who style themselves physicians who will not take as keen interest in studying the abnormalities of the human structure as they will in the treatment of disease. The book commences in chapter I. by taking up genetic anomalies, obstetric anomalies, followed by a most interesting chapter on anomalies of stature, size and development. The author then takes up in several chapters surgical anomalies; after which anomalous skin, nervous and mental diseases are discussed. The book is well illustrated, and will be found of peculiar interest to the practitioner.

The Physician's All-Requisite Time and Labor-Saving Account Book. Designed by WILLIAM A. SEIBERT, M.D., of Easton, Pa. Philadelphia and London: The F. A. Davis Co., Publishers. 1893. Toronto: A. P. Watts & Co., College Street.

There have been placed upon the market in past years quite a number of physicians' account books, some possessing a certain amount of merit. The great fault with the majority, however, has been that practitioners could not depend upon them as being acceptable in a court of law as proof of an account. Dr. Seibert's "All-Requisite Time and Labor-Saving Account Book" has this great advantage in that it has been tested in this respect, *and not found wanting.* This when known will be more than sufficient to sell the book, as too many good accounts have been lost in the past by doctors owing to this very fault. It is sufficient to say for this book that the entire account appears on one page, so that it only requires a glance to see just how Mr. or Mrs. or Miss So-and-So stand financially with their attendant physician. The book is on very good paper, and is so bound that no amount of wear can damage it.

E. B. TREAT, publisher, New York, has in press for issuance early in 1897, the "International Medical Annual," being the fifteenth yearly issue of that well-known one-volume reference work. The prospectus shows that the volume will be the result of the labors of upwards of forty physicians and surgeons, of international reputation, and will present the world's progress in medical science.

The publisher states that the kind reception accorded to the "Medical Annual" has rendered it possible for him to spare no expense in its production; while the editorial staff have devoted a large amount of time and labor in so condensing the literary matter, as to confine the volume within a reasonable size, without omitting facts of practical importance.

The value of the work will be greatly enhanced by the thoroughness of illustration, both colored plates and photographic reproductions in black and white will be used wherever helpful in elucidating the text.

"To those who need the condensed and well arranged presentation of the medical advances of the past year—and this class must necessarily include all physicians—we heartily commend the 'International Medical Annual.'"

The volume will contain about seven hundred pages. The price will be the same as heretofore, $2.75. Full descriptive circular will be sent upon application to the publisher.

Report of the eleventh annual meeting of the Association of Executive Health Officers of Ontario, held at Niagara-on-the-Lake, September 14th, 1896, has been received. Toronto: Warwick Bros. & Rutter, printers, bookbinders, etc., Front Street West. 1896.

Obituary.

THE LATE MRS. WASSON.

The medical profession all over Ontario were greatly shocked when they took up the papers on the morning of December 30th last, and read of the tragic death the previous evening of Mrs. Wasson, wife of Mr. Thomas Wasson, who for nine years past has occupied the position of Detective to the College of Physicians and Surgeons, as well as caretaker of the buildings on the corner of Bay and Richmond Streets. The accident was simply unaccountable, as the deceased had been known to be exceedingly careful to avoid even any chance of accident occurring in any way in connection with the elevator in the building. Mrs. Wasson was not only a favorite in the ordinary sense of the word, but was more than that—she was esteemed by every one who knew her.

The Physician Himself.

Dr. P. D. Keffer has moved to No. 50 Alexander Street.

Dr. W. F. Gallow has taken up practice at 261 College Street.

Dr. Lee, of Niagara-on-the-Lake, has "gone west" to British Columbia.

Dr. J. P. Hubbard, of Brock Avenue, city, has moved to Forest, Ont.

Dr. Norman Anderson has removed from 263 Victoria Street to 83 Bloor Street West.

Dr. Thos. H. Middlebro', Toronto, '92, has received the appointment of gaol physician at Owen Sound.

Dr. Wm. Grant, of Perth, Ont., died suddenly on Saturday, January 16th, at his residence in that town.

Dr. John Percy Waddy, of Rosseau, has been appointed Associate Coroner for Districts of Muskoka and Parry Sound.

Dr. Alex. Dame, of Spadina Avenue, was married last month. The doctor and his wife returned to the city three weeks ago.

Dr. E. H. Adams has been appointed as chairman of a joint committee of the Toronto Public School and Collegiate Institute Boards.

Dr. F. W. H. Young, of Rosseau, and Dr. J. E. Jenner, have been appointed Associate Coroners of the Districts of Muskoka and Parry Sound and the County of Essex respectively.

Dr. W. J. Glassford died at his residence at Scotland, Ont., on January 2nd. The doctor was an old Toronto School boy, having graduated in 1887. He leaves a widow and one baby.

Dr. H. Ferguson, who was physician to the Victoria Hospital for Sick Children, has returned from his trip to Mexico and taken the office occupied by the late Dr. R. J. Hastings, of 535 King Street East.

The Chatham Medical and Surgical Society will meet regularly on the second Tuesday of each month.

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

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Original Contributions.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

NOTES ON THE SYMPTOMATOLOGY AND DIAGNOSIS OF SENSORY, MOTOR OR TROPHIC PARALYSIS, CONSECUTIVE TO LESIONS OF CONTIGUOUS PARTS, RESULTING FROM VIOLENCE.

BY THOMAS H. MANLEY, M.D.,

Professor of Surgery in the New York Clinical School of Medicine, New York.

(Continued from last issue.)

MODERN studies of the important role which the peripheral nerves play in traumatic lesions of bone have cleared up many perplexing problems observed in this common but important class of cases. It has been seen that in certain cases the nervous system bears important and definite relations to pathological changes in the soft parts. Let us now study the outcome of that interesting series of vaso-motor disturbances always attendant on great violence to a limb or to the lower segment of the trunk. It is a matter of common observation in all cases of lumbar or sacral spinal injury followed by paralysis, that in spite of every possible precaution we may observe, gangrenous sloughs over the sacrum or nates may follow, of varying extent and duration, and always proportional to the extent and duration of nerve implication.

One of the most hopeful signs in those of ultimate recovery is often first made manifest through the healing processes in the necrotic tissues. The fat, muscular and connective tissue melt down into an ichorous fluid, and nothing remains but a broad plaque of fibrous residue, which is finally lifted up and thrown off by the encroaching mass of new cells, advancing towards the centre from every direction. This sphacelus is a local death of a part, the initial lesion of which is always neural. It first presents itself as a congestion, then as an asphyxia, and lastly by death.

We will find precisely the same neural phenomena in serious as well as in simple fractures when the limb has sustained very violent concussive force at the time of injury. In a case of double dislocation of both the knee-joints I have seen stasis, asphyxia and mortification follow in such rapid succession as to destroy both limbs in six days.

The predominant feature after a very bad fracture is the presence of only the first phase of the moribund state in the injured limb. Syncope is present and local palsy is nearly complete. The limb is numb, powerless, cold and blanched. Vaso-motor paralysis is quite complete. In bad compound fractures, the precipitate or inexperienced may confound this temporary annihilation of animation for somatic death of the part, and at once sacrifice a valuable member which might have been saved. This syncope may deepen into peripheral asphyxia, or total death of the part. The former is the most common. Now with the aid of artificial heat, vitality will in time return, when the extent of disorganization has not been too great. In these cases the greatest caution must be observed not to institute any line of treatment which will in the slightest degree embarrass or impede the circulation: hence, in the time of John Hunter and Baron Larry, strict injunctions were always enjoined not to adjust a fracture in permanent fixture until the full establishment of reaction. For though they taught, and taught well, that as but moderate heat and recuperative measures would open the "pores," the minute arterioles and capillaries, to the blood current, so also, misdirected or premature pressure over the enfeebled arterial trunks might destroy every possible hope of preserving the limb. But it is interesting and important to know that though the main part of a limb may escape after asphyxia, nerve inhibition in certain areas may remain permanent, or so feebly vitalize a part that we may have the "*mort a plaque*" of the French in certain situations, or on the injudicious

application of any sort of constricting pressure by bandages or splints when enormous sloughs extending in various directions may follow. As the circulation is feeble in a limb after injury, sensation is blunted and trophic influence is in abeyance. When moderate compression, on the adjustment of the fragments and application of the dressings is effected, in many, very troublesome gangrenous sores may follow. If this unfortunate phenomenon after hip injuries were more generally known and its etiology more strongly emphasized by authors of text-books on surgery, very many painful sequelæ of fractures might be obviated. It is better then as a preliminary measure to permanent adjustment in severe fractures at the hip and in other situations, to be content at the primary dressing with placing the limb in a comfortable but temporary adjustment which will require no compromising constriction until reaction has set in, and at the initial dressing employ no materials which will not permit of easy changing and inspection of the limb at a subsequent date without the painful disturbance of the fragments. But there may be gangrene in patches or gangrene *en bloc* after certain fractures or injuries to a limb, in which no compression whatever is applied except what is necessary to hold the dressings in position. These are the cases which supply the courts with malpractice suits, provided the attending surgeon possess a pecuniary inheritance, or has accumulated anything beyond his living expenses. The usual history of these cases is that after professional attendance is summoned, and the wound or fracture dressed, a day or two subsequently, when the dressings are removed or the limb inspected, we may find it totally destroyed by a gangrenous process which is rapidly advancing towards the trunk, or that there are one or more gangrenous patches, superficial or deep, at the most dependant portions. It must be conceded that in many of these cases the predominant lesion is vascular, damaged arteries; while in others the lesion is of a mixed character, neuro-vascular; while with a considerable proportion of them the main etiological factors are vaso-motor or trophic, which, by means known to surgery, we can always obviate or prevent.

We will meet with another group of highly interesting and important lesions which are of a traumatic origin, but in the beginning are of an articular type, arthropathic, the trophic and other degenerative changes being always consecutive. In a considerable number of this class of cases there is always a well marked though remote connection with sensorium and cerebral

processes. They belong to the pseudo or muscular anchylosis. Their morbid anatomy consists in a wasting of muscle, its fatty or fibrous degeneration, a fusion of the muscle sheaths, diminished vascularity of the affected limb or impediment in muscular movement with œdema about the joints. The neural structures play an important role here. Mobility, though greatly impeded, is not destroyed, trophic changes are well marked, the tendon reflexes respond but feebly, though electrical irritation is always fairly preserved. The most marked and constant subjective symptom is *pain*, and the objective anchylosis moderate or complete. When the limb is in a quiescent state little discomfort is felt, but on movement in various directions, and in cases involving the lower extremity, throwing the weight on the affected side produces the most agonizing distress. The initial cause in this group of cases is a bruise, a wrench or twist, or what is commonly known as a sprain. The primary lesion in the majority of these is arthritic. Indeed, exclusive of those attended with fracture into an articulation or immediately contiguous with it, the joint distraint is the first feature in the category of pathological changes. As the lower extremities, which carry and support the body, are exposed to greater and more violent strains than the upper, the most frequent seat is in the knee or ankle joints. One of the most tedious and painful cases of this description which I have ever seen was a tarso-metatarsal injury.

In severe cases inflammation is propagated from the synovial membrane through the thecal sheaths to the muscles, the cancellus bone substance of the epiphyses and the periosteum. But the most persistent and constant lesions are those which involve the peripheral nerves. These are most distinctly manifest after inflammatory symptoms have yielded at the joint.

The primary nerve lesions in not a few cases are undoubtedly attributable to laceration of the nerve sheath, or a hæmorrhage into the medullary substance, which diminishes the motor activity, induces atrophic and degenerative changes in all the tissues contiguous to and for a considerable distance from the joint: but in a strange and inexplicable manner, not yet understood, makes little impression on the nerves of sensation, but very greatly aggravates the pain sense. It is a matter of common observation long since brought out by older writers, that the degree of muscular wasting, pain, anchylosis, motor paralysis and chronicity bear no relation to the extent of incipient subcutaneous, diffuse ecchymosis, tumefaction

and synovial inflammation. On the contrary, many of the most unyielding cases which we encounter are those in which the objective signs of joint implication are unimportant. Consequently, in these arthropathies, in the absence of characteristic symptoms, if seen soon after injury, there is no way by which one can say whether the patient is shamming or is really disabled. But *in time* the objective signs are unmistakable and positive. The muscles shrink in bulk and diminish in length. Vaso-motor palsy is well marked, the circulation is feeble, and hence the skin is pale and below the normal temperature. We will discover, on movement at the joint, that muscular action is more or less restricted. At the elbow, knee or ankle, we will observe that, even though the patient be anæsthetized, the degree of flexion in many is definitely limited either by the muscular contractions or by the adhesions of the muscular sheaths. The former will prevail in chronic cases, and the latter in recent ones. The same rule is followed in major articulations. In spurious cases, of course, under ether the rigid joint will limber out when consciousness is cut off. The pathological changes in this group, though in the main the same as those considered in connection with motor trophic paralysis, are much more complex. With the majority of these, besides the local changes, there are phenomena present which clearly indicate a participation of the sympathetic and central ganglia, besides an unmistakable constitutional dyscrasia of a neuralgic or rheumatic character. These latter, however, are better demonstrated by the clinical history and therapeutic tests than by an ocular demonstration of the morbid anatomy. Indeed, it is only on this assumption that it is possible for us to explain the causation in very many of these joint neuroses.

A nervous, hysterical individual, after comparatively an unimportant injury, suffers from a painful contractured crippled limb; on which every sort of orthopædic appliance has been adjusted, bandage-pressure, massage, electricity, etc., without avail; but by sudden violent mental emotion, or on the local infliction of pain, the stiffened muscles relax, the joint moves and the patient walks again, or moves his arm after months of pain and joint distraint. This is the class in which the travelling charlatan cures where the surgeon fails, the one in which the itinerant "natural bone-setter" will have it that the "bone is out." He promptly recognizes the preponderance of the hysterical element, hypnotizes his patient, so to speak, by gaining his confidence and ready

submission, besides impressing him with a firm conviction that he can cure him. If these cases are treated early and appropriately they usually promptly yield. No extensive organic changes have yet set in, so that with restoration of motion and moderate exercise, the wasting muscles are again called into activity, the residue of inflammation is disintegrated and absorbed, the circulation is stimulated and normal nutrition of the parts restored. On the contrary, when this condition of joint-sprain, attended with limitation or loss of motion, passes from its transient, acute or subacute stage into chronicity, we will observe those organic degenerative changes which always result as a sequence of protracted immobilization, muscular inaction and tropho-motor paralysis, both in the growing child and in the adult. And though we may partly obviate the deformity by radical surgical measures with the adjustment of prothetic appliances, this intervention will make no impression on the irretrievably atrophied fibrous muscle, the vaso-motor changes in the circulatory system, osseous degeneration or the parenchymatous changes in the cells of the peripheral nerves.

It cannot be denied that in this group, under divers circumstances, in certain seasons, climates and systemic conditions, rheumatism plays an important role. But as it most commonly presents itself and properly belongs to those pathological affections of an intra-articular character, it will be more appropriately considered with those maladies which only secondarily involve joints and muscles and are of a systemic origin.

In conclusion, those pathological changes in the limbs, primarily traumatic, it has been the aim of the writer to call attention to and to emphasize the importance of always adequately appreciating the predominant part which the peripheral spinal nerves play in the role of etiology, a full recognition of which will shed much light on their true character, render possible a correct prognosis and open the way to sound principles of treatment.

A Graduate's View.

Lady—Is it not strange that so many new diseases should be coming around? Young Doctor—Well, you see, madame, we physicians have learned how to cure all the old diseases, and if nature did not invent new diseases, the earth would soon be overcrowded.

CHOREA: TREATMENT BY TRAINING.

BY B. E. M'KENZIE, B.A., M.D., AND H. P. H. GALLOWAY, M.D.

INCIDENTALLY, in the autumn of 1892, our attention was directed to this subject by the following circumstances: We were consulted concerning a boy of eight years who had a well-marked rotolateral curvature of the spine. It was arranged that he should come to our class in gymnastics for three months for treatment of the deformity. Something occasioned delay, so that he did not return for nearly three months, and in the meantime he had developed chorea. Not considering the proposed treatment in any way contra-indicated, we allowed him to come to the class and take light work, mostly free gymnastics. There were several other patients in the class doing the same work, but not affected with chorea. Ordinarily, implicit, prompt obedience to the word of command given by the director is insisted on; but at first it was impossible for this boy to make the movements required. No special attention was paid to this fact, and he was permitted simply to do the best he could, and to see the work done by the others. After the first lesson it was quite evident that the incoordination was less marked, and that he was rapidly gaining control of his unruly members. In less than a week—the exercises were carried on every day—every sign of chorea had disappeared, and as long as he remained under observation there was no return of the trouble. No other treatment was employed.

Since that time three other cases of chorea have come under our observation. In two of them, however, the circumstances were very unfavorable; we could not have full control, and they remained in the class but a short time. In these no improvement was observed. The third is a recent case, and is still attending the class. The patient is a girl of eleven years, who has suffered from chorea for two years, and who had ceased to improve for several months before commencing the treatment by training, though under the most competent supervision. After three weeks of treatment similar to that outlined in the first case, no observable trace of the disease remained. [Since the above was written a very careful examination of this patient has revealed an occasional slight incoordinate movement of the right foot in walking.]

Little is said by writers in English concerning the treatment of chorea by other means than rest and drugs. The only passage that we have found recommending exercise is the following: "Rhythmical movements and mild gymnastics are of service in the later stages of the disease, when the normal functions of the centres are being restored; but they are not advisable in the earlier stages, except in cases of very slight degree" (Gowers: Diseases of the Nervous System, 1888, vol. II., p. 580).

Wharton Sinclair says: "It is of the greatest value in bad cases to place the patient in bed and keep him there until the symptoms improve" (Pepper's System of Medicine, 1886, vol. V., p. 455).

Sachs says: "The most important factor in the treatment of chorea is rest, absolute rest, often to the exclusion of all other therapeutic measures" (Nervous Diseases of Children, 1895, p. 125).

Whatever objections may be urged against this method of treating acute cases, it is reasonable to hold that it gives promise of excellent results when the cases have become chronic. In these, the central nervous system has acquired an ataxic habit which demands its re-education, so that the impulses sent out may be subject to the will, and be made to affect only the group of muscles intended to act in harmony for the accomplishment of a desired end. The effort to make movements in harmony with those of others whose circumstances bring them into a sympathetic relation with the patient, the influence of example, and the force of the kindly but positive word of command given by the instructor afford the needful aid and stimulus to accomplish the desired result.

Lagrange makes a somewhat extended reference to the subject: "It is in affections marked by defective coordination of movement, that exercise has given its best results, and especially in chorea or *danse de Saint Guy*.

"At the Hospital des Enfant's Malades, in the year 1854, a number of cures were obtained in cases of unusual or rebellious chorea by M. Laisné, who was attached to the service of Professor Blache as Professor of Medical Gymnastics. Let us enquire how Laisné directed his treatment, which to-day is the most rational employed. In simple chorea, when the child still has a measure of control over its movements, simple floor exercises, rhythmical and executed to word of command, afford the nerve centres a form of discipline to which the child's members yield obedience, and the will gradually resumes control over the muscles.

"In severe cases, when the disorder of movement is complete, and where the child is powerless to control in any measure the incoherent movement of his members, Laisné proceeds thus: During four or five days at first he is contented to give general massage of all the muscles. About the sixth day passive movements are introduced, the limbs agitated by involuntary movements are held quiet for some minutes, and then methodical, rhythmical, passive movements are given. When the excessive agitation and the involuntary movements commence to calm down, then active rhythmical movements are given."

Prof. Blache says: "Passive movements have a remarkable effect. At first the patient's will comes into play, either assisting in the movement or the contrary. Little by little, however, the muscles employed become habituated to associated action directed by the effort of the operator. The will, which had exercised but a feeble control over the muscular system, seems gradually to resume its function, and it is then seen that the incoherent movements little by little diminish in frequency and intensity (La Médication par L'Exercise, Dr. Fernand Lagrange, 1894, p. 425)."

THERAPEUTIC NOTE.

MAURANGE (*Gazette Hebdom. de Méd. et de Chir.*) regards eugenol as an antiseptic suitable for subcutaneous use in cases of pulmonary tuberculosis with cavities and in those of pulmonary gangrene. He thinks it has an elective action on tissues invaded by Koch's bacillus, and consequently ought to prove curative of lupus. The ordinary subcutaneous dose for an adult is from three to fifteen grains; six grains are enough to produce local anæsthesia for minor dental operations. The injection is but slightly painful if the solution is thrown in slowly. In from four to twenty minutes an anæsthetic zone appears about the puncture. The anæsthesia is of short duration. The author credits Meunier with this formula:

℞ Eugenol..... 45 grains.
Heavy petroleum oil .... 1,500 "
M. Dose, a cubic centimetre.

The following formula is attributed to Moty:

℞ Eugenol..... 150 grains.
Oil of sweet almonds..... 1,500 "
M. Dose, from a quarter to three-quarters of a cubic centimetre in the treatment of lupus.

Medicine.

ESSENTIAL NATURE AND TREATMENT OF PNEUMONIA.

Dr. Andrew Smith, in the *Medical Record*, January 2nd, 1897, discusses the essential nature of pneumonia. He attributes much importance to the action of the cilia of the respiratory tract in preventing the entrance of pneumococci which are so often present in the mouths of healthy persons. But the protection of the cilia is not absolute, and is liable to be impaired by any cause which affects the bronchial mucous membrane, such as bronchial catarrh, whether due to a chilling of the surface or otherwise. Having gained access to the alveoli, the germs excite a degree of irritation that involves the adjacent capillaries, and the result is an exudation into the cell, which serves as an excellent culture medium for the germ. The cell is thus filled with an exudate swarming with pneumococci, and the overflow from one cell starts the process in adjacent cells; a lobule filled with exudate overflows into the bronchiole leading to another lobule, and so on, until an entire lobe becomes involved. A toxin is rapidly formed and quickly absorbed into the circulation, producing the familiar symptoms of infection—chill, fever and nervous shock. The toxæmia is maintained so long as fresh supplies of toxin are being formed, i.e., as long as the consolidation is spreading. But, as in artificial cultures, a given quantity of culture medium can maintain the life of a given number of germs only for a certain time. The soil becomes exhausted, the death of the germ stops the supply of toxin, and the temperature falls. If the invasion has been regular and rapid and comes to an abrupt termination with the complete consolidation of the lobe, the supply of toxin will cease abruptly, and we have defervescence by crisis. But if the effusion into the air cells has been gradual the supply of toxin will continue in one part whilst it fails in another—the process will be prolonged and the defervescence will be by lysis. This does not exclude the theory of an antitoxin being formed, and he thinks both theories explain the clinical phenomena better than either one alone. In other words, he suggests that the defervescence may be the result of two causes—the failure of the supply of toxin and the action of an antitoxin.

Suppuration is probably due to a mixed infection, and gangrene to involving of a branch of the bronchial artery, shutting off the nutrient circulation from the corresponding area of lung tissue. The fact that the framework between the alveolar spaces has its own separate blood supply apart from the vessels involved in the pneumonia process prevents a sweeping destruction of lung tissue. Infection of various serous and synovial membranes is explained by assuming a destructive process by which the interior of an air cell is made to communicate with an adjacent vessel, and thus allow the contents of the cell—swarming with bacteria—to flow into the general current of the circulation.

Accepting these hypotheses, he suggests that treatment be directed to the attempt to render the exudate inimical to the development of micrococci, and quotes the remarkable successes claimed by Stipp and Theodore Clements from the inhalation of chloroform, which, he says, is a very efficient germicide, a small fraction of one per cent. being sufficient to sterilize a culture medium. He thinks the result obtained by these observers, viz., a remarkable hastening of the crisis, was due to this action rather than to the one they had in view—its sedative and anodyne effects. It would be necessary to give the chloroform before the air cells were completely occluded, in order that it should come into immediate contact with the exudate. In a case quoted, in which defervescence took place on the fourth day, forty hours after the inhalations were begun, the chloroform was diluted with half its bulk of alcohol and given in sufficient quantities to produce a decided drowsiness only for ten minutes of each hour. Since the pneumococcus lanceolatus will not grow in a medium that contains the slightest trace of free acid, he suggests the addition of a votalile acid, such as acetic, in quantity not sufficient to be irritating.

T. F. McM

That hypnotism produces disease of the cerebral cortex—the most important part of the brain—has just been asserted by an eminent Washington scientist. A more vital argument against the practice is that it places mind and will under the control of another. No second person has the moral right to wield that power unless direct necessity compels it, and no man or woman under ordinary circumstances can be morally justified in conferring it.—*Ex.*

Orthopedic Surgery.

A CLINICAL STUDY OF INJECTIONS OF IODOFORM-GLYCERINE IN TUBERCULOUS OSTEOMYELITIS.

In a paper on the above subject, presented at the 1896 meeting of the American Orthopedic Association, Dr. Harry M. Sherman, of San Francisco, details his experience with this method of treatment. The time covered in the trial was the three years beginning with January, 1893. The number of cases treated was twenty, and these represented fifteen hips, two knees, two ankles and one elbow. The total number of injections made was one hundred and sixty-four, of which eighty-one were intra- or periarticular, eighty-one were intraosseous, and in two cases the evacuated cavities of tuberculous abscesses were injected. In each case, and at each injection, the following points were carefully noted: 1. Location and direction of the puncture of the needle, the depth of its penetration, and the character of tissues through which it passed as far as this could be estimated. 2. The amount of the iodoform-glycerine injected. 3. Whether there was or was not a reflux of the iodoform-glycerine through the puncture hole after the needle was withdrawn. 4. Whether there was or was not pain following the injection, and the location of it. 5. Whether there was or was not a general reaction following the injection.

In all a uniform mixture of 10 per cent. of iodoform and 90 per cent. of glycerine, both by weight, was used. For the intra- and periarticular injections no special effort was made to have the mixture sterile, but there was no pyogenic accident, all abscesses that developed being chronic and tubercuious. For the intraosseous cases the mixture was always sterilized by exposure to the temperature of a boiling water bath for two hours, and the author of the paper claims that as iodoform does not volatilize below 239° F., nor glycerine boil below 554° F., decomposition of either ingredient never took place. For the intraosseous injections it was necessary to use a special syringe with a very strong steel needle, having a canula fitting the bore closely and ground flush with the bevel of the needle-point, a ratchet being fitted on the piston rod, and the force necessary to drive the injection through the cancellous bone being developed by a pinion-wire key.

In inserting the needle it was generally possible to appreciate whether it was passing through soft tissues, cartilage or bone, and also the firmness of the bone; in this way an approximate estimate could be made of the extent and severity of the lesion.

The greatest number of injections given any one case was twenty-one. The greatest amount of iodoform given any one case was 198 grs. The greatest amount of iodoform given at one injection was 24 grs. The highest temperature of reaction following an injection was 104° F. Usually the height of a reaction was attained in a few hours, but in some cases not for two days. The usual interval between the injections was two weeks, but sometimes they would be suspended for two, three, or four months, to permit observation, and then be resumed. In no case was there iodoform poisoning or suppuration sequent to the injections.

The results are thus summed up: Seven cases improved, as if under protective treatment alone; ten cases got worse, five having tuberculous abscesses develop, and seven being submitted to operation, one of whom died; three cases were unchanged: one died of tuberculous meningitis. In general, it seemed that the course of the disease was practically unchanged by the treatment, except in two cases, where the patients were plainly made worse.

In the discussion which followed, there was a pretty general agreement with the reader of the paper, but some of the members of the Association were disposed to look more favorably upon this method of employing iodoform. In the treatment of tuberculous sinuses several had found it decidedly beneficial.

B. E. McK.

Causes of Migraine.

Dr. Marcus, of Pyrmont, has suffered from periodic headaches for forty years, and thinks they are due to changes in the atmospheric pressure. He finds that the advent of his own attacks and of those of others are always coincident with a variation in the pressure, which is not always accompanied with a change in weather, but is confirmed next day by the official weather bulletin. Dr. Marcus asks physicians who live in localities where the atmospheric pressure is more stable to investigate the matter and possibly find some relief for chronic sufferers.—*Therapeutische Wochenschrift*, March 29th.

Gynæcology and Obstetrics.

TREATMENT OF ECLAMPSIA.—VEIT.

It is impossible to recommend a uniform plan of treatment; there is, however, no doubt in the author's mind but that a large number of cases would and do recover without any and with every treatment. The claim that the prognosis is bettered through rapid delivery by accouchement forcé or Cæsarean section is as yet not substantiated, as are also the reported favorable results from venesection. The best method so far seems to be the administration of large doses of morphine. A rational therapy of eclampsia is not possible until the pathology of the disease is absolutely clear; it is not improbable but that different cases have a different ætiological basis. The hastening of labor by harmless means, rupture of the membranes, delivery after full dilatation, large doses of morphine for the suppression of the attacks, the non-administration of food, per os, to unconscious patients, and the induction of diaphoresis by external means, seem to offer the best chances to the patients. There is practically no reason why an attack of eclampsia in itself should be considered so grave as to justify radical operations, which may be safe in the hands of single operators, but which subject the patient to great risks, if performed by the profession at large. In exceptional cases, however, exceptional operations are justifiable. (*Am. Jour. Obs.*)

In a case of eclampsia, which occurred on January 12th of this year, Dr. Carveth and the writer performed, under chloroform, accouchement forcé, delivering a seven months' fœtus in less than twenty minutes. The patient was a second-para, having had thirteen convulsions with her first labor—about fourteen months ago. Before seen she had had six convulsions, and could not be roused. As the bowels had been thoroughly well moved several times a day for the two previous days, and in spite of this the convulsions occurring, it was deemed advisable to deliver as promptly as possible. The method of dilatation suggested by Harris, of Paterson, N.J., was adopted. It consisted in using the index finger, followed by others as dilatation went on, in flexion instead of in extension, as is usually done; for the flexor muscles are more

powerful than the extensors. The thumb is employed for passive pressure against the opposite wall of the cervix. The hand follows the finger into the vagina, and firm pressure with the external hand must be made over the fundus while one is forcing the first two or three fingers through the external os. The main difficulty was experienced in forcing in the second finger. Three-fourths of the time was consumed in accomplishing this. With the third and fourth fingers well in, there was no difficulty in stretching the os the whole width of the hand. The forceps was then applied and fœtus delivered. The baby had evidently been dead several days, as the skin of the upper three-fourths of the body was of a bluish black color. This case does not bear out the theory advanced at times, viz., that on the death of the fœtus the convulsions cease. Here convulsions only ceased with the delivery of the baby. The convalescence was normal. H. T. M.

SOME ASPECTS OF URETERITIS IN WOMEN.

In the *American Journal of Obstetrics* appears a paper of Dr. Edward Reynolds, of Boston, on this subject, in which he accepts the ætiology of Mann: (1) Injuries during child-birth; (2) previous disease of the bladder; (3) gonorrhœa; (4) suppuration of the pelvis and kidney; (5) pelvic disease, such as pelvic peritonitis, cellulitis and tumors; (6) abnormal conditions of the urine; (7) tuberculosis. He thinks that a majority of all the cases he has seen have been inaugurated by an altered condition of the urine due to renal insufficiency; that it is far from an infrequent disease, and that while the symptoms of even mild ureteritis may be extremely distressing, its physical signs are often insufficient and easily overlooked; and that the reason why so many gynæcologists still fail to detect it with a fair degree of frequency is that they expect to find a more well-defined and pronounced lesion than in fact exists.

In regard to the *diagnosis of chronic ureteritis*, there is first a frequency of micturition, which is increased by the erect posture, and especially by standing, but not wholly relieved by recumbency, the patient being invariably obliged to rise from one to many times at night—the micturition may or may not be painful; and secondly, a bearing-down pain, which is increased by standing, but

is usually completely relieved by a few hours' rest in bed. A combination of these two symptoms should lead to a careful search for the physical signs of this affection.

Severe ureteritis may lead to a palpable enlargement of the ureter, but then in the milder cases there is merely tenderness and a desire to urinate by making pressure over the vaginal portion of the ureter. This tenderness is so closely localized as to be easily overlooked, but when once found its limited localization to the ureter is a diagnostic point of importance. Where the micturition is painless he is content with medicinal treatment, but where painful he makes a cystoscopic examination of the bladder. The *treatment* is divided into palliative and curative methods. In the cases where the vesical mucous membrane is inflamed around the ureteral orifice he has obtained prompt relief of the pain on micturition, and usually a decrease in the frequence of urination by the use of strictly localized applications of the solid nitrate of silver to the inflamed areas.

In the curative treatment reliance must be placed upon general hygienic and medicinal measures. He gives the first place to the free ingestion of water—three or four pints a day. General massage has been found of benefit, and active exercise, such as the use of the bicycle. As regards medicinal treatment, he has seen little or no benefit from any except alkalies. Latterly he has been using small doses of iodide of potash, mercury, or iodide of potash and mercury mixed, with a view of increasing the general metabolism of the body as a whole. This treatment has produced more improvement than any other, and the improvement has been proportionate to the increase of urea, as shown by examinations of the urine.

The clinical picture presented by an *acute ureteritis* is distinctive. It is now frequently met with, but even at present it is frequently mistaken for intestinal colic, pain due to renal stone, catarrhal appendicitis, or acute catarrhal salpingitis.

A woman in good health is suddenly attacked by abdominal pain, which may be limited to one side, but which is more frequently pronounced on one side and moderate on the other. The pain is often intermittent and often fairly severe. General abdominal tenderness may be absent throughout the attack, but will usually be noticed at one or more of the three cardinal points. At the beginning of the attack, tenderness is only made out by deep palpation of the affected kidney—the first cardinal point. A day

or two later this renal tenderness has perhaps decreased, but there is now a very marked tenderness at a point midway between the umbilicus and the anterior iliac spine (e.g., McBurney's point, diagnostic of appendicitis, or a corresponding point upon the left side)—the second cardinal point. As the attack passes off the renal tenderness disappears, and the tenderness at McBurney's point, or its fellow, decreases; but a new tenderness now appears on deep pressure at a spot about an inch above Poupart's ligament —the third cardinal point. Vaginal examination is negative till about the time when the last-named tenderness appears; but from that time on a vaginal examination will reveal the characteristic tenderness, and usually a distinct swelling of the vesical end of the affected ureter. Examinations of the urine usually show crystals of uric acid or oxalate of lime in a limpid urine.

At the beginning of the attack it cannot be differentiated from colic due to renal stone, but the clinical course will usually in the end distinguish it. In the middle period of the attack a right-sided ureteritis closely simulates catarrhal salpingitis; but the urinary symptoms and the tenderness over the lower end of the ureter as the attack passes off will easily differentiate it. If only the final stage is noted it may easily be mistaken for a catarrhal salpingitis, though the localization of the tenderness and swelling should prevent any mistake at this stage. Even when ureteritis is complicated by intestinal disturbance, the characteristic progress of its tenderness from above downward, the appearance of the vesico-ureteral tenderness, and the urinary disturbances will distinguish it from intestinal colic. A left-sided ureteritis accompanied by constipation might be mistaken for colic due to obstruction in the rectum or sigmoid flexure.

The affection tends towards recovery, but usually ends in a chronic condition without treatment. If the patient is kept in bed on a bland diet under alkaline diuretics and the ingestion of a large amount of water, there is usually an immediate and complete cure. H. T. M.

PULMONARY EMBOLISM IN PLACENTA PRÆVIA.

A FOURTH case occurred at the Berlin Maternity Hospital. It was a multipara, with a marginal placenta prævia. Chloroform was administered and version performed. While in the act of pulling down the foot respiration suddenly ceased, then became superficial and gasping. In spite of saline infusion, heart massage and

artificial respiration, death occurred in five hours. A post-mortem showed numerous air bubbles in the right auricle and pulmonary artery. Other possible causes, as acute anæmia, chloroform intoxication, or that the air might be the result of putrefactive changes, would be excluded. Only a small piece of placenta was detached from the uterine wall, and it is thought that the air must have entered the open lumen of the vessel during performance of version. (*Am. Jour. Obs.*) H. T. M.

VAGINAL TUMORS.

VAGINAL tumors are so rare, and so little is said about them in text-books, that the following case may be of some interest.

A woman, aged thirty, mother of two children, and at about the fourth month of pregnancy, complained of great pain and irritation about the vulva, a constant bearing down and a troublesome leucorrhœal discharge. The rectum and bladder were also involved in the distress. On examination, the vagina was found to be almost completely filled by a number of tumors springing from the anterior wall. These growths were of various sizes, elongated, larger at base than apex, and tapering towards the extremity. The largest of these tumors was about the diameter of the fourth finger and an inch in length. From being inflamed and excoriated the growths were very tender and sensitive to the touch. The structure of these tumors was apparently fibrous. Relief being imperative on account of the severe pain and discomfort, I removed all the growths with the scissors, after firmly tying them off at their bases with a ligature passed pretty deeply to avoid hæmorrhage. Complete relief followed this operation and the woman was confined at the full time without difficulty of any kind. There was no return of the tumors during the two years the patient remained under observation, nor could any injury to the vagina be detected. I have never been able satisfactorily to place the above tumors in any class mentioned in text-books. They were not cysts, nor was a pedicle found as is usual in polypi. They were not warty in character, and there was no reason to suspect specific disease as the cause. Non-recurrence shows clearly there was no malignancy. The accounts of fibroids of the vagina do not agree with the description above given, but the structure to the naked eye was certainly fibrous. Pregnancy, no doubt, caused a rapid growth, but did it originate that growth ? J. H. L.

Pathology.

OBSERVATIONS UPON THE RELATION BETWEEN LEUKÆMIA AND PSEUDO-LEUKÆMIA.

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AND

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(Continued from January issue.)

It may be stated, in the first place, that in leukæmia the leucocytosis is notoriously inconstant: that during the course of the disease the white cells may for a long time maintain a normal ratio to the red, though all the other classical signs of the disease be present—a stage which is commonly known as the *aleukæmic* period of the malady: such a circumstance is indeed common enough, and has been placed on record by a number of observers. Mosler,[6] Seelig,[7] Troje,[8] and several more have made notes of cases illustrating this point. For a longer or shorter time each of these observers had occasion to see patients manifesting the usual symptoms of Hodgkin's disease. In each instance, however, the condition of the blood became altered, presenting later on a leucocytosis corresponding to that found in leukæmia, and some have regarded such as examples illustrating the sequence of one malady upon another, distinctly separated therefrom. At the same time, in each instance the author questions his right to maintain so absolute a distinction, in view of the renewed observations that are being made, and which would seem to prove not only that the leucocytosis of leukæmia is notoriously inconstant, but that in all probability there is but a slight influence at work producing this differentiation of the two maladies. Troje has suggested that some inhibitory mechanism regulates the distribution of leucocytes through the circulation; that where leucocytosis occurs in the blood the regulating apparatus is inefficient, and hence we observe young developing forms free in the circulation. The further theory is suggested that to a certain extent the vessel walls may inhibit or stimulate the exudation of leucocytes by their greater or less porosity, thus explaining the occurrence of metastases.

Such cases as these above described, no matter how they are explained, would certainly indicate a marked variability in the leucocytosis which, too, would appear from the records to depend in no way upon treatment. Cases which have occurred in the Royal Victoria Hospital have shown both in the acute and in the chronic form not only wide variation in the cellular ratio of the blood corpuscles, but in many instances the condition of the blood has been such as to render absolute differential diagnosis impossible. Meeting then, as we do, so many stages of leucocytosis in the multiple lymphomata varying from a normal ratio up to an excess of the white over the red cells, it may be questioned whether those cases recorded by Ebstein[3] and others, when leukæmia has followed upon Hodgkin's disease, are really to be looked upon as instances of one disease complicating another, or whether we are not rather observing the same disease in its different forms.

It by no means infrequently happens that in cases of multiple lymphomata the number of white cells borders so closely on the ratio found in leukæmia that we are in doubt as to the presence of a true leukæmia or of an ordinary leucocytosis. Nor is this all: one may find in other diseases a leucocytosis quite as marked numerically as seen in leukæmia. Such a condition has recently been described by Palma.[9] In his case there were multiple glandular swellings throughout the body, while the blood condition was normal, and accordingly the diagnosis of Hodgkin's disease was established. A month later, however, the blood showed all the characteristics of true leukæmia, and shortly after the patient died, showing at the necropsy a primary round-celled sarcoma of the thymus gland with metastases in the various organs, with multiple hæmorrhages and a bilateral suppurative nephritis. Such a case is in itself sufficient to show how impossible it is from the blood alone to make a satisfactory distinction between a number of these diseases which induce leucocytosis. Similar instances, too, have come within our experience at the Royal Victoria Hospital, where patients have entered with symptoms pointing to true leukæmia, and with a blood-count likewise assuring one of such a condition, and yet at the necropsy primary sarcoma of the pelvic organs was found, with numerous metastases, somewhat resembling the case described by Palma. One of these patients entered the hospital with general *malaise*, enlargement of the spleen, and some fever. Within a few days after admission purpuric spots developed upon the body, while hæmorrhages were manifest from the gums, from

the stomach and the intestines. There was a marked leucocytosis of about 1 to 100, the leucocytes being chiefly of the large mononuclear variety. Within a week after admission the patient died, having developed nodules in the skin, high fever, progressive asthenia, repeated hæmorrhages, and showing shortly before death a still more marked mononuclear leucocytosis. A diagnosis of leukæmia was made, though the necropsy revealed a primary sarcoma of the cervix uteri.

In another patient the condition was somewhat similar. She was admitted because of hæmorrhages from the stomach and purpuric spots on the trunk and limbs. The course of the disease was progressively severe up to her death, two weeks after admission. The examination of the blood had revealed a ratio of white cells to red of 1 to 21, the leucocytes being chiefly of the lymphatic variety. From our experience of the other case just mentioned, and from a few similar instances recorded by Fagge,[10] the diagnosis of sarcomatosis was made and verified at the necropsy, the primary lesion existing in the ovaries. It would have been natural under the ordinary conditions to have made the diagnosis of leukæmia, were it possible to regard the blood examinations as a reliable means of diagnosis in all cases. Some instances recorded by Fagge are practically identical with the two just described, and while that author has already published them as instances of sarcomatosis, Ebstein, in his classical work on leukæmia, considers Fagge to be in error as having confused sarcomatosis and true leukæmia. Our own cases, however, not only aid in bearing out the diagnosis made by Fagge, but would seem to further emphasize the great confusion to which we are liable on attempting to distinguish any of the various lymphomatous diseases by an examination of the blood alone.

We have observed, too, an instance bearing a similar instructive lesson in the wards of the General Hospital some years ago—a case which has since been put on record by Professors Adami and Finley.[11] The patient referred to was a girl, aged eleven, who was admitted to the hospital on account of a violent hæmatemesis. An examination revealed great anæmia, a much enlarged spleen, and a ratio of the white cells to the red which bordered on the line between leukæmia and leucocytosis. The spleen was very much enlarged. After a few days' sojourn in the hospital the patient died, presenting the typical morbid anatomical changes of leukæmia or of Hodgkin's disease, the diagnosis in such a case being absolutely impossible. Nor are the multiple lymphomata the only

diseases which may be followed by this so-called leukæmic condition of the blood. Litten,[12] Gottlieb,[13] and others have recorded cases of pernicious anæmia which have manifested in the course of that malady a blood state typical of true leukæmia.

We must therefore conclude that an enormous increase of white cells is certainly not in itself diagnostic of leukæmia, nor is there any special class of diseases to which an over-abundant leucocytosis is confined, inasmuch as the most varied kinds of disease may, under peculiar conditions, manifest extreme leucocytosis. Such, for example, are some cases of pneumonia, malignant disease, and the terminal stage of many affections: so far as numbers are concerned, under a great variety of conditions the blood examination may be indistinguishable from that of leukæmia.

It is, however, usually held that in leukæmia a special type of leucocyte is increased—namely, the mononuclear in contradistinction to the secondary leucocytosis from other causes and accompanying other affections, which is chiefly of the polynuclear variety; and for the different forms of leukæmia there is in each case a different kind of leucocyte which is thought to be characteristic—for the myelogenous form, the myelocyte; for the splenic form, the hyaline cells; for that type in which the lymph glands are most affected, the lymphocytes.

While it must be granted that such preponderance of one form frequently obtains, it must be acknowledged that the condition is not absolutely diagnostic of true leukæmia. Above all, it is generally accepted that in Hodgkin's disease we may at times get a marked leucocytosis, the increase of white cells concerning mainly the lymphocytes, the same class of cells which are increased in lymphatic leukæmia; indeed, it not infrequently happens, as stated by Professor Osler,[14] that the lymphocytosis of Hodgkin's disease may become gradually so marked as to be quite indistinguishable from that found in lymphatic leukæmia. Such instances are described as cases of Hodgkin's disease which have run into lymphatic leukæmia, and yet the process may be so gradual as to render it impossible to decide where the Hodgkin's disease has ended and where the lymphatic leukæmia began. It is upon the occasional occurrence of such events that Penzoldt[15] and Palma[9] believed that there exists a lymphatic Hodgkin's disease different from the ordinary variety of Hodgkin's disease, and which may be a prelude to the true leukæmia.

In one disease, then, we already find the possible development

of a great increase of the leucocytes characteristic of one form of leukæmia. The same, too, has been found in the mononuclear increase referred to already in several cases of sarcoma, a leucocytosis which both numerically as well as morphologically bore all the characters found in true leukæmia: nor can we believe that in a host of other affections where leucocytosis occurs that any absolute rule may be laid down as regards the type of the leucocytosis. While it may perhaps be generally accepted that in carcinoma the leucocytosis is mainly polynuclear, yet we have seen not a few cases where a distinct and indeed sometimes enormous increase of the large mononuclear element was obvious. Further, one of the resident physicians of the Royal Victoria Hospital, Dr. R. B. Shaw, who has been engaged of late in a study of the leucocytes found in secondary anæmias, has observed a most irregular variation in the type of the leucocytes, whether relatively or absolutely increased, that the mononuclear may sometimes not only equal in numbers the polynuclear leucocytes, but not infrequently there is a distinct preponderance of either the lymphocytes or the large hyaline forms.

While, however, it may be agreed that so far as the lymphocytes and the large hyaline forms are concerned there is nothing in the examination of the blood which enables us to absolutely differentiate between Hodgkin's disease and true leukæmia, yet in the myelogenous form there is perhaps less difficulty, inasmuch as one finds there a type of leucocyte which does not occur normally in the blood. This myelocyte, as it is called, while increased in this form of leukæmia to a marked extent, is nevertheless absent in other varieties of that disease; and it seems but justifiable, from this fact alone, to exclude this cell as an essential feature of the diagnosis of all leukæmias. At all events it does not occur in the lymphatic form, nor is it always to be found in the splenic variety: on the other hand, too, it is now known to occur in conditions other than leukæmic, though, as far as we know, never to the same extent.

The eosinophile cells, as is well known, offer no feature of absolute diagnostic importance: not only do they seem to be increased in emphysema, pemphigus, scarlatina, etc., but every now and again an examination of patients in whom the blood condition is presumed to be normal there may occur a most marked increase in eosinophilous cells. We have examined slides from the blood of a patient in the practice of Dr. Hamilton, of Montreal, where

slight anæmia had been suspected, and were surprised to find that whereas the red cells appeared almost normal, there was a distinct eosinophilous leucocytosis, probably fifty per cent. of the white cells showing eosinophile granules. One of us, while recently in Baltimore, had an opportunity of seeing a patient in Dr. Osler's wards who suffered from trichiniasis, and in whose blood there were sixty per cent. of eosinophilous cells.

In an interesting work upon the blood formation, Dr. Saxer,[16] of Marburg, has recently urged that red and white cells proceed orginally from what he calls primary wandering cells: that from these cells the various forms of leucocytes may arise, and that so far as origin is concerned they are all the same. The differentiation comes late in the development, and the various forms represent merely the different stages of growth. He has shown that one variety—namely, the myelocyte—is capable of developing in the mature organism into the red blood cell. The significance of this is apparently of no small importance as affording an explanation of the frequent occurrence of myelocytes in the blood of leukæmic patients. Some defect in the development of the leucocytes has occurred, and they have probably, he thinks, not performed their important functions.

The work is chiefly of interest as showing that all leucocytes are members of one series, the one developing from the other, as could readily be proved from a study of the subject on the basis of embryology.—*British Medical Journal*, from the Medical Clinic of the Royal Victoria Hospital, Montreal.

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W. H. P.

(*To be continued.*)

Public Health and Hygiene.

THE PROVINCIAL BOARD OF HEALTH.

The regular quarterly meeting of the Provincial Board of Health was held in the Parliament Buildings, Toronto, February 10th, 11th, and 12th, 1897. The following are a number of the most important questions which were under consideration by the Board :

Health of the Province.

The quarterly report of the Committee on Epidemics stated that the public health of the Province during the last quarter had continued as a whole excellent. There had been no case of small-pox reported, and the winter thus far had been free from any widespread presence of la grippe. There had been, however, *outbreaks of diphtheria* reported from many districts, which, except in a few instances, were of limited character and had been dealt with with increasing promptness and thoroughness by the the local Boards of Health. The outbreak in the disease, the report says, which has been reported from several frontier municipalities as having been traced to men infected with the disease leaving for their homes from the lumber camps in the Algonquin Park districts, has been most remarkable, as illustrating at once the ready transmissibility and extreme contagiousness of even mild cases in strong men to children, who have contracted the disease in many cases with fatal results.

The monthly reports which had been received regarding *scarlatina* indicated that in several municipalities this disease had shown a more than average prevalence during the quarter. Fortunately the outbreaks had generally been mild.

The past quarter had, as usual, seen *a decline in the prevalence of typhoid*. It was most satisfactory to note that, excepting the water supply of Windsor, there was no public water supply in Ontario to which suspicion of sewage pollution could at present attach.

The quarter had been notable for having seen the Board's efforts successful in obtaining such an Act and regulations made under it as would, it was trusted, speedily place the whole work of *inspection of dairy cattle and abattoir inspection* in the Province on an advanced and satisfactory basis. The notable progress

made in the work of general cattle inspection in the several States of the United States, and especially by the systematic abattoir and cattle yard inspection by the Federal Government staff, whereby 35,917,479 animals were inspected in nine months of 1896, of which 89,399 cattle were condemned, showed very fully that there was the same need for local Boards of Health in Ontario through the veterinary inspectors to maintain a similar close supervision over our animals as over men.

Ventilation.

Dr. J. J. Cassidy read a lengthy report from the Committee on Ventilation. He had made a number of tests of public buildings in the city, and he gave the results of them. Dr. Sheard, City Medical Health Officer, was present, on the invitation of the Board, and took part in the consideration of the subject.

Toronto's Milk Supply.

Dr. Sheard explained to the Board the regulations about to be enforced in Toronto in regard to persons supplying milk to residents. One of the chief conditions imposed on those who would be allowed to supply milk to the city was that the dairy cattle should be inoculated with tuberculin. Reports regarding the condition of the dairy cows whose milk is sent to Toronto will be received according to arrangement made with veterinary surgeons in the various places, and if reports are not in within sixty days, those not sending them will be suspended from the privilege of supplying milk to citizens. Dr. Sheard stated that the milk of three thousand cows was now being sent to Toronto, and he asked that tuberculin necessary for the inoculation of this number should be supplied by the Provincial Board of Health.

Amendments to Plumbing By-Laws.

These proposed amendments received careful consideration by the Board, and are calculated to assist largely in removing the nuisances and diseases hitherto resulting from defective plumbing. They provide also for the inspection of plumbing by proper officials.

Health Officers.

The relation of health officers to town councils was referred to. Several cases have come before the Board in which doctors have worked for years as medical health officers, sometimes without remuneration, and, generally, for small pay, and have been

summarily dismissed, no cause being given for such action. Other doctors were threatened, blackguarded and worried, because some of their recommendations with regard to certain sanitary requirements did not meet the views of certain councillors or ratepayers.

Summer Resorts.

A special report was read regarding summer resorts. The report stated that several conferences had taken place between the committee and representatives of the Muskoka Lakes Association, with a view to beginning the work of practical sanitary supervision of the resorts on those lakes. E. H. A.

MONTHLY REPORT OF CONTAGIOUS DISEASE IN ONTARIO FOR JANUARY, 1897.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

		Total Reported.	Per cent. of Whole Reported.
Total population of Province	2,233,117	1,442,989	64
" Municipalities	745	487	65
" Cities	13	12	92
" Towns and Villages	236	138	58
" Townships	496	337	67

VARIOUS DISEASES REPORTED.

Municipality.	Pop. Reported	Typhoid.		Diphtheria.		Scarlatina.		Tub'rcul'sis	
		Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum
Cities	415,829	10	0.2	30	0.7	..	..	54	1.3
Towns and Villages	269,486	..	..	5	0.2	1	0.03	11	0.4
Townships	757,674	13	0.1	31	0.4	4	0.05	47	0.6
Total Pop. Reported	1,442,989	23	0.1	66	0.4	5	0.03	112	0.7

Note.—Whooping cough has made its appearance in several districts. There have been seven deaths reported for the whole Province, while three deaths from measles are recorded. Two deaths from whooping cough occurred in cities, none in towns and five in townships. The deaths from measles were all in the townships.

Proceedings of Societies.

TORONTO MEDICAL SOCIETY.

THE regular meeting was held February 4th, 1897, Dr. Wilson in the chair.

Dr. D. C. Meyers presented a patient, a man who in September last, while walking across a barn floor in the dark, unexpectedly stepped off the edge and fell downward and forward, striking his shoulder. He suffered a good deal of pain in it, and noticed that it gradually became stiff and that certain muscles around it were wasting. Patient consulted Dr. Meyers for paralysis of the arm. The scapula and head of the humerus were found to be firmly adherent. There was distinct atrophy of the extensor muscles of the joint, the deltoid, supra- and infraspinatus and the teres minor. The doctor felt that the course to be pursued was to break down the joint adhesion. The patient was sent to St. Michael's Hospital under Dr. E. E. King, where this was done. Passive motion was still being kept up. Patient has now fair movement, being able to raise the humerus to a right angle with the scapula and do rotation backward almost as perfectly as ever. The speaker stated that there was no disturbance of sensibility, nor was there any reaction of degeneration in the affected muscles. Questions of interest in the case were, why should there be atrophy of the muscles of the joint, and why were the extensor muscles implicated only?

Dr. E. E. King referred to the operation of breaking the adhesions and to the great improvement of the condition.

Dr. James F. W. Ross asked if nerve injury would account for the atrophy of the muscles.

Dr. J. N. E. Brown reported a case of a school boy, who had been struck on the shoulder-joint by a ball. Fixation of the joint and atrophy of its muscles followed, accompanied by great pain. Breaking up under an anæsthetic was done at the Victoria Hospital. No improvement following, excision of the upper end of the head of the humerus was made. The removed portion contained caseated material. The muscles about the joint under exercise developed and a fair movement of the joint was obtained; there was complete relief from pain. In this case he considered the atrophy due to disuse.

Dr. Meyers gave the various theories that have been held to account for wasting of sets of muscles. The most probable was that the cause was reflex from injury to the articular end of the sensory nerves of the joint. Experiments on animals had demonstrated the correctness of this view.

Dr. Edmund E. King read a paper on seminal vesiculitis. The anatomy of the vesicles was first described and their functions pointed out. The cause of the disease was usually gonorrhœal. Many of the symptoms were reflex as well as local, and were very often overlooked or called prostatitis or cystitis. Some neurotic condition was often present, as headache, premature or delayed emission, discharge of a thick, glairy fluid when a constipated movement takes place, fulness in the rectum which was sensitive and tender during evacuation, were other symptoms. A number of interesting cases were then reported.

Dr. James F. W. Ross said gonorrhœa had come to be a terrible scourge. Vesiculitis in man corresponded to pyosalpinx in woman and was usually the precursor of it. He believed if doctors, clergymen and lawyers and other males had Fallopian tubes, gonorrhœa would soon be suppressed.

Dr. D. C. Meyers and Dr. A. Primrose also discussed the paper. Dr. King closed the discussion.

Dr. W. J. Smuck reported two cases of melæna neonatorum. In the first case he was called to see a child which had been delivered by a midwife. It had been vomiting dark blood and was passing black material from the rectum. It was pale and cold. It vomited blood some five times during the first twelve hours and passed two tarry movements from the bowels. Rest and warmth were enjoined, but no medicine. Recovery followed. In the second case delivery was performed by forceps. The cord was around the neck. Respiration was difficult. There was a great deal of mucous in the throat. Blood was vomited and passed by the bowels. Death ensued. No post-mortem.

Dr. Smuck then gave a resume of the bibliography of the subject. Among causes given for this condition were ulcers of stomach or duodenum, the hæmorrhagic diathesis, premature labor, cord around the neck, injury to the vaso-motor centres and undue chilling of the body surface at birth.

Dr. Webster reported a case. The child had been passing black stools until the fifth day before he was notified. There was also hæmatemesis. He prescribed the compound tincture of camphor

and iron. The dark stools continued for four months and then ceased. The child died at the ninth month.

Dr. Rudolph reverted to the various causes of the disease. They were in many cases the same as melæna in the adult. He thought, therefore, there was no necessity of inserting this trouble in infants in a separate category.

Dr. J. F. W. Ross reported a case of failure of ventral fixation of the uterus and entered a strong protest against the procedure. The uterus was a movable organ and meant to be so. In a short time this operation would be done away with as a remedy for retroversion and retroflexions.

The Society then adjourned. J. N. E. B.

DELEGATES FROM NEW YORK MEDICAL SOCIETY.

The New York State Medical Society have elected the following delegates to the Ontario Medical Association: Messrs. William R. Howard, Rochester: M. D. Mann, Roswell Park, Buffalo; Henry L Elsmer, F. W. Limmer, Syracuse: Seneca D. Powell, New York; Daniel H. Cook, Albany.

To the Canadian Medical Society: Messrs. C. S. Parkhill, Hornellsville; C. M. Rexford, Watertown; E. F. Brush, Mount Vernon: W. J. Hermann, Rochester; Eugene Van Slyke, Albany; W. B. Jones, Rochester; Wendell C. Phillips, New York.

The seventeenth meeting of the Simcoe District Medical Society was held in Barrie, on Tuesday, January 26th.

The regular meeting of the Waterloo and Wellington Medical Association was held in Guelph, Friday, February 5th. Papers were presented by Dr. Cameron, Galt, on "Abscess of the Brain," with report of case; Dr. Lindsay, Guelph, on "Report on Four Cases of Bowel Lesions." Some interesting cases in practice were also reported.

The Huron Medical Association meeting was held in Seaforth, February 3rd, 1897. The following programme was presented: "Infectious Endocarditis"; "Enteroliths," Dr. A. Dalton Smith, Mitchell; "Raynaud's Disease" (with patient), Dr. Graham, Brussels; "Irreducible Hernia of long standing, operation, exhibition of specimen": "Fibroma of the Uterus," A. H. McKenzie, Moncton; Purpura Hæmorrhagica," Dr. Irving, St. Marys.

The Canadian Journal of Medicine & Surgery.

Editorials

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DISEASE IN INDIA.

As in more favored lands, disease in India is due to poverty or ignorance, and, in many instances, to these causes downright carelessness is superadded. From an article in the *Indian Lancet*, of Calcutta (January 1st), we learn that the common diseases of India are fever, pneumonia, small pox, dysentery, diarrhœa, and, most important of all, cholera. Fever is most widely prevalent

from September to November, when the cold weather is coming in, so much so, that almost everybody gets a share of it. The remedies are *flannel next the skin, quinine, and nourishment.* But the poorer classes cannot make use of these remedies, for one-fifth of the teeming millions of India pass through life in chronic starvation. One authority, indeed, Sir Charles Elliott, has even admitted that half of the agricultural population of India do not know what a full meal is. As the *Indian Lancet* says: "How can people who find it extremely difficult to keep body and soul together, provide themselves with flannel, quinine and nourishment?" No reason is given for the prevalence of small pox, and none could be given if vaccination and revaccination were enforced by the Imperial Government. In London, England, with a population of 5,000,000 souls, there were only two cases of this disease on the 10th of last January. In the Province of Ontario (Canada), with a population of 2,223,117, one doubtful case of small pox was reported during the past year.

Dysentery is primarily dependent on high temperature; but there is an intermediate factor. Microorganisms, communicable through polluted drinking water, and occasionally the air, are probably causative of this scourge of tropical regions.

Cholera has been shown to depend on a pathogenic organism, which is bred on the soil of Bengal, and issues at intervals from that region to slay its tens of thousands. Would it not be well, then, for the rulers of India, since they cannot provide a panacea for the poverty of their subjects, to introduce schools among them, so that they may acquire some of that saving knowledge, which is more potent for good than all the wealth of Golconda?

In Ontario, the School Board is the first governing body in an unorganized township; funds are raised by self-taxation, assisted by Provincial subventions, to educate the children of the district. In organized townships school taxes are heavy. Since the Provincial Board of Health was organized in 1882, we find that young Canadians readily adopt improved sanitary measures. Having learned at school something about the necessity of breathing pure air, the fatal results arising from the use of impure water, the necessity of keeping the person and clothing clean, they remain in adult life aiders and abettors of sanitary law.

There is an urgent necessity for planting sound sanitary ideas in the the minds of persons in India, who should set an example to the masses. In a recent number of an Indian daily paper, we

learn that the condition of the sewers of Calcutta has reduced the subsoil to a condition little better than a trenching ground; that the scavenging of the streets is a public scandal; that refuse, which ought to be removed before dawn, is frequently left lying about, fermenting and poisoning the air throughout the heat of the day; that the water supply is defective; and that the death rate is abnormal during the hot weather. The cause to which this disquieting state of affairs is ascribed is an old and familiar one, namely, the preponderance of native members in the Municipal Council. The remedy propounded is drastic. "The feeling is growing stronger that the sanitation of Calcutta cannot be left indefinitely to be the plaything of gentlemen like Babus Norindro, Nath Sen, and Surendranath Banarjee, and whether the reform be made from within by the expedient of nominating more Europeans, or from the outside by the more drastic measure of abolishing an elective Municipal Council altogether and substituting some other administrative authority, a change must not be much longer delayed."

So much for the lack of sanitary education in the Council of a large city. The life of the community of an Indian village is exceedingly primitive, and, in some of its features, suggests a survival of the patriarchal life, described in the Old Testament. Its central feature is the "tank," or water reservoir, usually surrounded with trees, beneath which the village elders each evening meet for conversation. Twice each day the cattle are brought to be watered at the tank, which, being also used by the owners for potable purposes as well as bathing, is probably one of the chief direct agents in the spread of cholera and enteric fever.

To improve the sanitary conditions of village life in India must be very difficult when we recall the millions of people who live under conditions similar to those just described. A little goodwill, enlightened by education, would, however, go far to remove the more flagrant evils, without the expenditure of much money. The village wells should be cleaned out and supplied with pumps. The tanks for drinking water should be kept separate from those used by cattle or for washing clothes and persons. Excreta should be covered with ashes or earth, then returned to the land, and vegetable refuse should be burned by the householder.

Owing to the poverty at present prevailing in India and the destitution of the people, which is so great that 2,750,000 persons are now employed in the famine relief works in

the different districts where the scarcity prevails, and to the depressed financial condition of India, arising from the lowered value of the silver coinage, it may not be possible for the Indian municipalities and District Boards to inaugurate any expensive sanitary reforms; but a gigantic effort should be made to introduce public schools, so that the young may have a chance to rise above the debased conditions of their fathers, and to learn among other things the simple primary truths which lie at the roots of all preventive medicine. J. J. C.

TORONTO DAIRIES.

In accordance with regulations recently issued by the Provincial Board of Health, the tubercnlin test is to be applied to the cows supplying milk to Toronto. All persons, selling milk in this city, are already obliged to report to the Medical Health Office, whether they keep cows themselves, or obtain their milk from wholesale dealers in the country. The name and place of residence of every person engaged in the milk trade in Toronto are, therefore, known to the City Medical Health Officer.

One of the chief conditions, now to be imposed upon all dairymen, who wish to be allowed to supply milk to the city of Toronto, is that their cattle shall be inoculated with tuberculin. A sufficient quantity of tuberculin will be supplied to the City Medical Health Officer, through the good offices of the Provincial Board of Health. This tuberculin will be sold at cost price to competent veterinarians, who wish to engage in this work, and they, in their turn, will be paid by the dairymen whose cows are tested. Reports, regarding the condition of these cows, will be received by the City Medical Health Officer from veterinarians who have agreed to do the work in the various places, and, if reports are not in within sixty days, dairymen whose cows have not been reported on will be suspended from the privilege of supplying milk to citizens. The report to be made out by a veterinarian gives the name and address of each dairyman: the number on the tag attached to each animal, which corresponds to the number entered on the report under which she is described; a brief description of the animal, her breed, temperature and condition previous to the test, and a record of her temperature, which has been taken every three or four hours for a period of from twelve to fifteen hours after the

injection. The report is signed by the veterinarian, who states that he has tested the animals described therein. He also signs another statement, to the effect that he has tested all the cows in the stables of the dairyman, whose name and address appear on the report.

These reports are returned to the Medical Health Officer of Toronto, who will examine them, and decide from the history of each case, whether the animal in question can or cannot be permitted to be used any longer for dairy purposes. The methods to be pursued by the veterinarian, should any animal be found to give the tuberculin reaction, are described in the published regulations of the Provincial Board of Health. (See page 20, THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.)

The labor and expense involved in carrying this undertaking into effect will be considerable, as the test will have to be applied to 3,000 cows. Dr. Sheard deserves to be complimented on his readiness to carry into effect the provisions of the new regulations.

J. J. C.

THE DEADLY ILLUMINANT.

THE presence of gas as an illuminant in a house is always a source of peril, and cases of fatal poisoning, caused either by accidental inhalation, by inexperienced persons blowing out the gas, or by suicides, are of very frequent occurrence. Witthaus says, "There can be little doubt that the most actively poisonous ingredient of coal gas is carbon monoxide, which exists in the ordinary illuminating gas in the proportion of 4 to 7.5 per cent., and in water gas, made by decomposing superheated steam by passage over red hot coke, and subsequently charging with vapor of hydrocarbons in the large proportion of 30 to 35 per cent." We understand that the gas now supplied in Toronto consists of a mixture of about 70 per cent. coal gas and 30 per cent. water gas, which is said to contain 12 per cent. of carbon monoxide. Though less deadly than water gas, it is quite sufficiently lethal, as the recent fatality at the Grosvenor Hotel proves. Witthaus further says, "The method in which carbon monoxide produces its fatal effects is by forming with the blood-coloring matter a compound which is more stable than oxyhæmoglobin, and thus causing asphyxia by destroying the power of the blood corpuscles of carrying oxygen from the air to the tissues. This compound of carbon monoxide and hæmoglobin is quite stable,

and hence the symptoms of this form of poisoning are very persistent, lasting until the place of the coloring matter thus rendered useless is supplied by new formation. The prognosis is very unfavorable when the amount of the gas inhaled has been at all considerable; the treatment usually followed, i.e., artificial respiration and inhalation of oxygen failing to restore the altered coloring matter."

It has recently been announced in the city papers that in addition to making a general examination of each hotel as to accommodation, the license inspectors will make an inspection of the gas fixtures in the bedrooms, and that the proprietors will be called upon to remedy any defects in the stop-cocks, etc. If cut-off gas burners were made compulsory in hotel bedrooms, the inspection ordered by the License Commissioners would be very useful and would tend to prevent fatal accidents. Apart from motives of humanity, and reasoning from their business interests only, hotel-keepers should initiate an improvement of this kind in their bedrooms, especially as the cut-off burners can be introduced at a very small expense.

The incandescent electric light has, however, so many advantages over gas that it ought to be generally adopted. It gives a clear, pleasant light, free from heat. The wires can be handled without danger. We understand, also, that this system can be introduced into a house at no greater expense than gas It contributes no impurity to the air, and does not of itself offer a special reason for ventilation, whereas in buildings, lighted in part or wholly by gas, the air is made impure by the mere combustion of the gas and the minimum amount of air supplied for each gas jet should be 3,000 cubic feet per hour.

This requirement ought to necessitate a reliable system of ventilation for a bedroom lighted by gas. The fact that a fatality occurs in a hotel bedroom, where the gas escapes, proves that the room is not ventilated. If it were, the chances for recovery in a person with sound organs would be fairly good, because a large amount of fresh air would then be present to dilute the escaping gas, and to keep down the percentage of carbon monoxide in the air of the room.

Even, however, if a ventilating contrivance is provided in a hotel bedroom, it is often under the control of the inmate, and not available when most wanted. While, therefore, saying a good word for automatic ventilation, ventilation not dependent on the whims

of the hotel guest, we hope it will not be introduced simply as a means to promote the continued use of gas as an illuminant, but rather so as to advance general hygiene and as a concomitant of the incandescent light. J. J. C.

CONSUMPTION NOW A COMMUNICABLE DISEASE.

THE following report is one passed by the Health Board of New York City at its recent meeting, and which is more than worthy of careful perusal. The report was made by Dr. Hermann M. Biggs, the pathological expert (to the Board), Dr. T. Mitchell Prudden, consulting pathologist, and Commissioner George B. Fowler. After pointing out the fact that in the last twelve or thirteen years there had been a reduction in New York in the mortality from tubercular diseases of over 30 per cent., yet Dr. Biggs proves how very deadly consumption still is all through that immense city. The report says :

"During the past year nearly 9,000 cases of tuberculosis were reported to this department, and nearly 6,000 deaths resulted from this disease. It is conservatively estimated that at least 20,000 cass of well developed and recognized pulmonary tuberculosis now exist in this city, and an additional large number of obscure and incipient forms of the disease. A very large proportion of the former cases constitute more or less dangerous centres for infection, the degree of danger depending in each instance upon the intelligence and care which are exercised in the destruction of the expectoration. It may be safely assumed that from the failure to safely dispose of the sputum of consumptives, from thirty to fifty inhabitants of this city daily become infected by tuberculosis, and of these about one-half later die from the disease. All this suffering and death, in view of modern scientific knowledge, we know to be largely preventable by the efficient enforcement of simple, well understood, and easily applied methods of cleanliness, disinfection and isolation.

"The knowledge now at command regarding the methods of extension of pulmonary tuberculosis entirely justifies the belief that its ravages can as certainly be limited by proper sanitary control and appropriate treatment as can other infectious diseases, more acute, more dramatic, and more readily communicated, but at

the same time far less prevalent, less fatal, and incomparably less important to the welfare of the community.

"From the beginning of this work the officials of this department have encountered, in the utter lack of proper facilities for the care of consumptives, an obstacle to practical success so great and so disheartening that we feel impelled to urge our conviction that the grave responsibilities which rest upon the Health Department in this matter cannot longer be adequately sustained without the immediate establishment, under its direct control, of a hospital for the care and treatment of this disease. No week passes in which the officials of this department do not encounter many instances in which the members of many households, numerous inmates of crowded tenement houses, employees in dusty and ill-ventilated workshops, and many others are exposed to imminent peril from victims of this disease, to whom either the doors of our overcrowded public institutions are closed, or who reject all proffered assistance and instruction and, from ignorance, indifference, or inability through weakness due to the disease, scatter infectious material broadcast, and thus diminish their own chances for recovery and imperil the health and safety of others. In such cases the sanitary suggestions of the Health Department inspectors are now futile, and effective action impossible. We are convinced that no other factor is so potent to-day in perpetuating that ominous death list from pulmonary tuberculosis as the lack of proper facilities for the care of the poor of this city stricken with this malady.

"The best medical opinion forbids that persons suffering from pulmonary tuberculosis be treated in association with other classes of cases in the general medical wards of general hospitals. This opinion is based on the daily observation that consumptives, when occupying hospital wards in common with other classes of cases, not only constitute a serious source of danger to other patients, but that they are themselves placed under peculiarly unfavorable conditions. This is an opinion which the former action of this Board has done much to establish and extend. It has very properly resulted in the exclusion to a large extent of persons suffering from this disease from many of the general hospitals to which they were formerly admitted. . . .

"As the Health Department has already declared its conviction that pulmonary tuberculosis is a communicable disease, and has taken steps looking toward its prevention, and as the information at hand shows that it is far more fatal than any other communi-

cable disease with which the Board has to deal, and destroys each year more lives than all the other communicable diseases together, it would seem self-evident that some efficient and far-reaching measures should be at once adopted to protect the inhabitants of this city from its further ravages.

"We would, therefore, respectfully recommend:

"First—That such action be taken by the Health Board as seems necessary and proper to at once secure the provision of hospital accommodations, under its charge, for the care of the poor suffering from pulmonary tuberculosis, who, as active sources of danger to the community, may properly come under its supervision.

"Second—That an amendment be made to the sanitary code declasing that tuberculosis be officially considered a communicable disease, and formulating regulations under which its sanitary surveillance shall be exercised.

"Third—That all institutions in this city which admit and treat cases of pulmonary tuberculosis be subjected to regular and systematic inspection by officials of this Board, and that specific regulations be established for the conduct of such institutions, in accord with the proposed amendments to the Sanitary Code.

"Fourth—That the scope of the measures designed for the education of the people in regard to the nature of pulmonary tuberculosis, and the methods to be taken for its prevention, be enlarged and a closer sanitary supervision be maintained over individuals suffering from this disease in the densely populated tenement districts, and in the crowded workshops and public buildings of this city."

In our opinion, the Health Board of New York City could not have done better than pass the above report. That there should be separate hospital accommodation for all tubercular cases is without doubt. And it is with pleasure that we note that the Gravenhurst Sanitarium is progressing so rapidly, and will soon be in full working order. It is to be earnestly hoped that similar steps will be taken at once by our Provincial Board of Health to that of New York, and consumption officially looked upon hereafter as a communicable disease, and have to be reported so by physicians in a similar manner as diphtheria or scarlet fever. In this connection we may add, that now that it is a fact that phthisis is contagious, and especially so through the medium of the sputum, we hope that railroad, street car and omnibus companies will strictly enforce a rule whereby such a filthy habit as indis-

criminate spitting in any public conveyance will not be allowed under any circumstances, as it is not only obnoxious to those of finer feelings, but the expectorations of those affected with pulmonary tuberculosis can become, after being exposed to the effects of a heated, dry, close atmosphere, the means of rapidly communicating the disease to many others. W. A. Y.

SOCIETY FOR PROTECTION OF HOSPITAL PATIENTS.

It will soon come to pass that the physician will have to call his patient into consultation, and follow the patient's superior wisdom and knowledge in administering treatment. For the latest London audacity has been an action brought by a nurse to obtain damages from the operating physician for "exceeding her wishes"!!! As she failed to gain her suit, a society for the "protection of hospital patients" has been formed. The *Medical Record*, in commenting upon the matter, makes the following terse and humorous remark: "It has been claimed that the brutal doctors have had their way long enough, and the time has now arrived when the 'clinical material' can talk back." Let us pause and ask, Where are we at, fellow practitioners? giving freely and cheerfully many weary hours to these charity patients, and they quietly "saving up" to enter a suit for damages against us. Let us hope that this fever to organize "The society for the protection of hospital patients" may begin and end with the parent one. Such societies would find our Canadian climate quite too frosty, and our physicians quite too busy to pose as defendants in "damage" suits; in truth, a sight for the gods. W. A. Y.

"CHARITY DOCTORS."

The following clipping from the *Evening Telegram* of February 23rd may prove of interest to our readers:

"New York, February 23rd.—A bill is being prepared for presentation at Albany for the regulation of hospitals and dispensaries that have been or may be established in this State.

"A meeting of physicians was held last week at 200 East Broadway, at the invitation of Dr. L. Cherurg. It was said at

this meeting that the indiscriminate establishment of dispensaries and hospitals has been so long permitted that grave injury is being done to reputable physicians, and that to compete with such institutions many of them have been compelled to work for almost nothing, whilst not a small number have been forced out of the profession because of inability to earn a livelihood."

We very much fear that, though Toronto has a population very much smaller than that of Greater New York, the profession here will soon have similar grounds for grumbling. Toronto has a name far and wide for its strict acquiescence with the Fourth Commandment, and we are afraid that, unless we harden ourselves in the future against unreasonable and unjust demands made upon our time as well as our purse for attendance upon and support of the already too numerous public dispensaries, our city will add to its Sabbatarian fame, "the city of churches *and charity doctors*;" and we also will have to call a meeting and give the public to understand that we are not practising medicine altogether for glory. W. A. Y.

TRINITY MEDICAL ALUMNI ASSOCIATION.

Trinity Medical Alumni Association offer a gold medal to the graduates and members of the graduating class in medicine of the Trinity University, or Trinity Medical College, or fellows of Trinity Medical College, who are members of the Association in good standing, for the best thesis on any subject pertaining to modern medical science. The theses standing first and second respectively in merit are to be read by the writers at the annual general meeting, and the medal to be presented at the annual banquet of the Association. W. H. P.

OUR INDEX MEDICUS.

Commencing with this number of the Journal, we shall publish as frequently as our space will permit an alphabetical list of practically all of the original papers which have come under our notice in the previous issue of our exchanges, with the name of the author, and name and issue of the journal in which that particular article appeared. We hope that the Index Medicus, as we have

named this particular department, will prove of interest and service to our readers in their studies, so that in writing a paper, for instance, they will be able at a glance to see just who have been contributing to the various journals recently on any particular subject, thus enabling them to get the very latest ideas in that direction. We acknowledge with pleasure the assistance rendered us in preparing this column by our esteemed contemporary, *The Medical Review of Reviews*, of New York City.—[Eds.]

THE NATIONAL SANITARIUM ASSOCIATION.

The National Sanitarium Association has issued a prospectus of, and a request in aid of the new consumption hospital at Gravenhurst. An immediate endowment of $250,000 is needed to place the institution on a substantial basis. Letters are cited from some of the best known medical men of Canada, who speak of the great need of a place for the isolated treatment of phthisical patients, and commendatory of this work. This establishment should be hailed with joy by the victims of the "white plague:" it will be a source of great satisfaction to the scientific spirit of the country: it will cheer the hearts of our philanthropists. The thousands of medical men in Canada, we are sure, will do what they can to help the good work along, as it is not a commercial but a national undertaking, and meant to provide for the poor who are in greatest need of such a place. J. N. E. B.

OUR THANKS.

We take this opportunity of thanking the profession all over Canada for the exceedingly hearty support thus far accorded The Canadian Journal of Medicine and Surgery. The subscription list is mounting up in a most encouraging manner, and it will be the one aim of its staff to make the Journal exemplary in every detail, so that the idea thrown out by one of our contemporaries recently, that a medical journal at $1.00 per annum cannot be what a strictly ethical medical journal ought to be, shall be *for ever* refuted. Our readers will notice that with this, only our third number, we have already increased, by a good many pages, the size of the Journal.—[Eds.]

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LAST MONTH'S LEADING ARTICLES.

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Abortion, An Unusual Case of Tubal. J. B. Sutton, F.R.C.S. (2)
Atresia of the Vagina. R. J. Wilson, M.D. (1)
Anisometropia. W. E. Bruner, A.M., M.D. (3)
Albumin in the Urine. L. L. Solomon, M.D. (3)
Acute Cerebral Palsies in Children. S. G. C. Pinckney, M.D. (4)
An Interesting Case of Nervous Anacidity. M. Savage, M.D. (5)
Anent Quinine and Acetanilid. S. H. Britton, M.D. (6)
Abdominal Surgery, Cases of. Prof. Annandale. (7)
Agraphia. W. Elder, M.D. (7)
A Plea for Sutures in the Mucous Membrane and Integument in the Median Line in Perineorrhaphy, as evidenced by fifty-nine consecutive cases, with one failure. E. M. Fuller, M.D. (8)
An Act for the Establishment of a Prosecuting Agent in Medicine, Dentistry and Pharmacy. F. A. Hanson, M.D. (8)
Amputations Prothetically Considered. J. M. Thorne, M.D. (9)
A Case of Multiple Tumor of the Brain. H. D. Chapin, M.D. (10)
Antitoxin, Intubation, and Tracheotomy. C. Douglas, M.D. (10)
A Case of Umbilical Fistula, with Prolapse of the Intestine. M. C. Cornell, M.D. (11)
A Remarkable Case of Fibro Chondroma, of Branchial Origin, removed from the throat of an infant six weeks old. A. W. De Roalder, M.D. (3)
Acute Purulent Otitis Media, Report of a Case of. F. L. Stillman, M.D. (3)
A Case of Kleptomania in Association with Uterine and Rectal Disease. L. W. Steinback, M.D., and S. Soli-Cohon, M.D. (12)
A Case of Chronic Supra-Pubic Sinus Healed without Operation. L. Bolton Bangs, M.D. (13)
A Brief Report of the Results of a Bacteriologic Investigation of the Mucous Membrane in one hundred cases. E. L. Vansant, M.D. (14)

Bronchitis in Children. F. Ryan, M.D. (8)
Bright's Disease, Treatment of Chronic Kidney Disease. J. Adolphus, M.D. (15)

Case of Congenital Umbilical Hernia. A. J. McCosh, M.D. (3)
Cervix, Lacerations of the. W. E. Ashton, M.D. (16)
Craniotomy of the Child. J. B. De Lee, M.D. (17)
Carcinoma of the Cervix Uteri, New Methods of Treating. F. H. Lunn, M.D. (18)
Carbolic Acid Poisoning, Forced Respiration. R. H. Norton, M.D. (3)
Congenital Defects of the Long Bones. B. E. McKenzie. (3)
Clinical Notes on Hysterectomy for Large Fibroids. J. F. W. Ross, M.D. (19)
Clinical Observations on Convulsions in the Adult. Wm. H. McEnroe, M.D. (1)
Cranial Surgery. F. W. Higgins, M.D. (1)
Crookes Tubes and Static Machines. S. H. Morrell, M.D. (1)
Can You Cure Deafness Caused by Catarrh? Robert Barday, M.D. (20)
Chronic Aural Catarrh. H. F. Jones, M.D. (20)
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Contribution to the Surgery of the Female Perineum. Ed. J. Ill, M.D. (13)
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Dermatitis, Herpetiformis. Louis A. Duhring, M.D. (27)
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Eczema Umbilici and its Treatment. J. A. Cantrell, M.D. (24)
Eczema of the Ear, The Successful Treatment of. A. Randall, A.M., M.D. (24)
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Epileptic Who Has Become Insane. E. H. Howard, M.D. (29)
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Graves' Disease Treatment of. H. MacKenzie, M.A., M.D. (27)
Generation, The Science of its Phenomena. W. F. Barclay, M.D. (5)
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Oxygen in the Treatment of Chlorosis. J. L. Cornish, M.D. (3)
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Woman and the Bicycle. E. D. Page, M.D. (30)

Key to Medical Publications.

1. Medical Record, N.Y.
2. The Lancet, London, Eng.
3. New York Medical Journal.
4. Atlanta Medical and Surgical Journal.
5. Maryland Medical Journal.
6. Medical Summary, Philadelphia.
7. Scottish Medical and Surgical Journal, Edin.
8. Journal of Medicine and Science, Portl., Me.
9. The Railway Surgeon, Chicago.
10. Archives of Pediatrics, N.Y.
11. Montreal Medical Journal.
12. Philadelphia Polyclinic.
13. International Journal of Surgery, N.Y.
14. Medical and Surgical Reporter, Philadelphia.
15. American Medical Journal, St. Louis, Mo.
16. Medical Bulletin, Philadelphia.
17. Medicine, Detroit.
18. New England Medical Monthly, Danbury, Conn.
19. Canadian Medical Review, Toronto.
20. The Laryngoscope, St. Louis.
21. The Medical Age, Detroit.
22. Buffalo Medical Journal.
23. Cleveland Medical Journal.
24. The Therapeutic Gazette, Detroit.
25. Langsdale's Lancet, Kansas City.
26. Pacific Medical Journal, San Francisco, Cal.
27. American Journal of Medical Science, Phila.
28. The Maritime Medical News, Halifax.
29. The State Hospitals' Bulletin, Utica, N.Y.
30. Brooklyn Medical Journal, N.Y.
31. Pediatrics, N.Y.
32. Bulletin of Pharmacy, Detroit.
33. Magazine of Medicine, Atlanta, Ga.
34. North American Practitioner, Chicago.
35. St. Louis Medical and Surgical Journal.
36. Chicago Medical Recorder.
37. Medical Press and Circular, London, Eng.

The Physician's Library.

The American Year-Book of Medicine and Surgery, being a Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from Journals, Monographs, and Text-books, of the Leading American and Foreign Authors and Investigators. Collected and arranged with critical editorial comments by eminent American specialists and teachers. Under the general editorial charge of GEORGE M. GOULD, M.D. One volume of nearly 1,200 pages, profusely illustrated with numerous wood-cuts in text, and thirty-three handsome half-tone and colored plates. Price, cloth, $6.50 net; half-morocco, $7.50 net. Philadelphia: W. B. Saunders, 925 Walnut Street. 1896.

The profession last year were more than pleased with this work, edited by so distinguished an authority as George M. Gould, along with the active co-operation of twenty-seven men, all of whom are high up in the profession and noted as authors. There is something far more attractive about a year-book than an ordinary every-day text-book, when the tired practitioner can sit down and get in one work not only the recent, but the very latest, material on that particular subject, with all the addenda thereto of the previous twelve months. "The American Year-Book of Medicine and Surgery," 1897, is more than up to date. Dr. Duhring, the eminent authority, has taken charge of the Department of Dermatology. A noteworthy and most useful feature of this year's volume is the brief recapitulation of the result of the year's work preceding each article. The work, as a whole, is gotten up in first-class style, and will doubtless meet with as large, if not a larger, sale than it did in 1896.

The Practice of Medicine. A Text-book for Practitioners and Students, with Special Reference to Diagnosis and Treatment. By JAMES TYSON, M.D., Professor of Clinical Medicine in the University of Pennsylvania, and Physician to the Hospital of the University; Physician to the Philadelphia Hospital; Fellow of the College of Physicians of Philadelphia; Member of the Association of American Physicians, etc. Illustrated. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1896.

Almost the only word that will express the character of this book is "complete." The author has not passed over any detail whatever, but has given the reader in each chapter not only the result of his own actual experience, but also that of fellow practitioners of undoubted standing. The work is well illustrated, there appearing, in addition to the ordinary ones, a colored plate in the chapter on "Leucæmia," which shows the most delicate work and coloring. This book is most certainly an authority.

A Treatise on Appendicitis. By JOHN B. DEAVER, M.D., Surgeon to the German Hospital, Philadelphia, containing thirty-two full-page plates, and other illustrations. Philadelphia: P. Blakiston, Son & Co., 1,012 Walnut Street. 1896.

The importance of this affection, and the manner in which this disease has come to the front in the past few years makes a work on the subject, by one so

well able to write upon it as John B. Deaver, most welcome. The book gives a systematic study of the disease, showing not only the usual symptoms, but also the various anomalous conditions so frequently met with. The chapter on "Differential Diagnosis" is most interesting and instructive, giving the various points of diagnosis between typhoid fever, pyo salpinx, suppurating ovarian cyst, fibroid tumor, extra-uterine pregnancy, and the disease in question. The colored plates are amongst the finest in execution we have ever seen.

Don'ts for Consumptives: or, the Scientific Management of Pulmonary Tuberculosis. By Charles Wilson Ingraham, M.D., Binghampton, N.Y., February, 1896.

All the works already written on this subject lay stress upon the points which *should* be attended to in the treatment of phthisis, but do not perhaps warn both the physician and the patient sufficiently strongly as to what *should not* be done. Dr. Ingraham, in this small book, has in a most happy manner taken this matter up from the negative standpoint, the result of his labor being that his work is a most readable one, not only to the professional man, but to the layman as well.

We acknowledge with satisfaction the receipt amongst our exchanges of the *Journal of Inebriety*, edited by Dr. T. D. Crothers, of Hartford, Conn. The *Journal* was established in 1876, and is not only the organ of the American Association for the Study of Inebriety, but is the only one, we understand, of its kind. Its material is good, and its pages all through contain most interesting reading.

THE Board of Management of Ontario Medical Library Association desire to acknowledge the receipt of Treves' "System of Surgery," and nine volumes of Transactions of Association of American Physicians.

Obituary.

DR. WILLIAM GRANT.

DR. WILLIAM GRANT, one of Perth's prominent physicians, lately died of heart trouble. Dr. Grant was a native of Glengarry, and started practice in Perth twenty-five years ago. He had always taken an active part in municipal matters, and represented the East Ward as councillor for many years. He married, about twelve years ago, a Miss Caldwell, daughter of the late Boyd Caldwell, lumberman, of Lanark village. She, with four children, survives him.

The Physician Himself.

Dr. Julia Thomas has removed to Carlton Street.

Dr. J. M. B. Woods has removed to 194 Spadina Avenue.

Dr. Julia Thomas has removed from Parliament Street to 243 Carlton Street.

Dr. T. Verner has returned from Rossland, B.C., after a sojourn of one week. He has settled again and resumed practice at 594 Church Street.

Dr. Spilsbury has gone to New York to take a post-graduate course. We hope the doctor will return quite restored to health after his long illness.

We wish to tender our congratulations to our brethren in the profession, Doctors Cotton and Forest, on the result of their recent suits in court. We were satisfied beforehand that the actions could only result in a verdict in favor of the defendants.

BIRTH.

Temple.—On February 12th, the wife of C. Algernon Temple, M.D., of a daughter.

MARRIAGES.

Pearson—Kennedy.—On January 1st, 1897, at the residence of the bride's mother, 113 Mutual Street, Toronto, by the Rev. John Pearson, D.D., Rector of Holy Trinity Church, Henry Clinton Pearson, M.D., of Demorestville, Ont., to Florence Mary, "Dollie," eldest daughter of the late John E. Kennedy, M.D., and granddaughter of the late Joseph Workman, M.D.

Segsworth—Bedwin.—Dr. John Segsworth, jr., of Willmette, Ill., a graduate of the Toronto Medical School, was married at Rochester on New Year's Day to Miss H. M. Bedwin, who for some time past was superintendent of one of the kindergarten schools of this city. The wedding was of a quiet nature, and took place at the residence of the bride's aunt, Oxford Street, Rochester, N. Y. The Journal extends congratulations.

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

VOL. I. TORONTO, APRIL, 1897. NO. 4.

Original Contributions.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

MORBID ANATOMY AND GENERAL PATHOLOGY.

BY T. H. MANLEY, M.D., NEW YORK.

THE scientific groundwork of all modern advances in the art of healing, in the repair or reconstruction of tissues or organs, is first a knowledge of the composition of parts, their frame-work and their relations; in other words a knowledge of structure of the human architecture, of *anatomy*, besides a large acquaintance with that vastly more complex subject which deals with the machinery in motion and vital processes, *physiology*.

Of late years, the student and practitioner have been greatly perplexed by the indifferent and indefinite sense in which the term pathology is employed, as pathological changes, pathological specimens or pathological elements, terms often leading to mistaken impressions or erroneous conclusions. This leads us to enquire, right here at the outset, what are we to understand by this term "pathological," now so loosely employed? As Mr. Victor Horseley has lately pointed out, pathology, properly speaking,

applies only to various deviations from health, or from normal function, of a structure or organ in the *living* body. It therefore follows that when we study any fluid, tissue structure or organ removed from the body, whether living or deceased, it is a dead substance: it has undergone organic changes, and hence belongs to the category of *morbid anatomy.*

Use and custom, however, have sanctioned the indiscriminate use and mis-use of scientific terms; hence our leading recognized authorities have been compelled to accede to our present nosology, and therefore, although it may be of vital importance to bear in mind the distinction between vital phenomena and conditions influenced by changes of decomposition, it has been decided to classify as pathologic all those deviations of tissue from the normal state which come under our observation in conditions of disease, whether removed from the individual in life, or from the body after death.

We have then, as it were, for want of a more descriptive term, "living and dead pathology," one made evident by disordered function or entire cessation of it, the deviation or cessation of vital processes; another, which can be studied only after decomposition has begun.

It will be well to constantly bear in mind that while pathology and its handmaid bacteriology have vastly broadened our knowledge of the nature of diseased conditions, so far, except very indirectly, it has contributed but little to their more successful management. As a matter of fact, outside of the domain of surgery, it has rather led to a state of medical anarchy and therapeutic nihilism. This has been unfortunate and has been one of the consequences of crowding pathologic studies on the student at the expense of the more important: clinical medicine, the actions of drugs, etc. Science has opened vast vistas, but when many vital problems are forced on us, it becomes impotent when empiricism must be resorted to. It is, therefore, evident that a just balance between these various branches must be preserved, for to press one forward to the neglect of the other evolves the fanatic and enthusiast, always an unsafe and dangerous pilot to the unseasoned, credulous beginner.

The subject of morbid anatomy, or morbid changes in tissues subsequent to somatic death, will be considered with the general subject of general pathology.

Orthopedic Surgery.

THE DIAGNOSIS OF FLAT-FOOT.*

BY H. P. H. GALLOWAY, M.D.
Orthopedic Surgeon, Toronto Western Hospital.

THE justification for a paper on the above subject lies in the unquestionable fact that this common affection very often passes unrecognized.

Bradford and Lovett[1] say: "There is scarcely any affection more frequently overlooked and mistaken for other affections than flat-foot." Tubby[2] says: "Probably there is no deformity so easily and so often overlooked as slight acquired valgus. . . . I have known cases to be treated for rheumatism, gout and ostitis of the bones of the tarsus." The experience of these authors is amply confirmed by all orthopedic surgeons.

The different conditions of the feet to which the name "flat-foot" is applied, are extremely common, and are capable of giving rise to great inconvenience and suffering: and inasmuch as the severer cases occur most frequently in those who cannot properly earn their living unless their feet be sound and strong, and as properly conducted treatment will nearly always afford complete relief, the importance of correct diagnosis will not be disputed.

The deformity of typical flat-foot is compound, being made up of three distinct elements, namely, pronation, valgus and flattening of the arch. The terms "pronation" and "valgus," as met with in orthopedic literature, have such varying shades of meaning that some explanation of what the writer believes to be the proper significance of these terms is necessary to a clear understanding of the subject under consideration.

1. Pronation. By this is meant a rolling over of the foot toward the inner side, as a result of which its inner border is carried inward and depressed, and its outer border correspondingly elevated. If any justification of this use of the term pronation were needed, it could readily be furnished by a comparison of the foot and leg with the hand and arm. If the palm of the hand be

* Read before the Toronto Medical Society.

placed upon a table, the arm being perpendicular, the anatomical likeness of the two extremities is at once appreciated. In this position the back of the hand corresponds to the dorsum of the foot, the palm to the plantar surface; the extensor muscles are anterior, the flexors posterior, in both: the thumb, corresponding to the great toe, is on the inner side, the little finger and the little toe on the outer side. While in this position if the hand is still further pronated its inner border will be carried inward and depressed, its outer border raised, and a similar movement of the

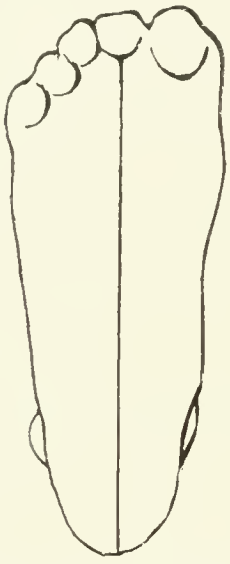

FIG. 1.

From photograph of the sole of an approximately normal foot. The straight line represents its long axis.

FIG. 2.

The same foot everted; the axis is still a straight line.

foot will have precisely the same effect. It does not weaken the comparison to say that in anatomical descriptions of the hand the thumb is said to be on the outside. The movement of pronation is not accomplished by exactly the same mechanism in the two extremities, owing to the variation of their anatomical construction made necessary by their differing functions; nevertheless the rotatory movement by which the inner border of the foot is lowered and the outer border raised, is homologous with the movement of pronation of the hand; and when the foot is held or fixed in this pronated position, as it is in the condition called flat-foot, it is

natural and reasonable to apply the term pronation, or over-pronation, to this element of the deformity. "Evertion of the sole" is a term sometimes used instead of pronation, but it is more cumbersome, less accurately descriptive, and has the disadvantage in actual use of sometimes being abbreviated to simple "evertion," and is then liable to be confounded with evertion of the foot, which is an entirely different thing. "Abduction" is sometimes used in the same sense. In fact the loose and indefinite use of the words evertion, valgus and abduction, as applied to the feet, is responsible for much exasperating fogginess in orthopedic literature.

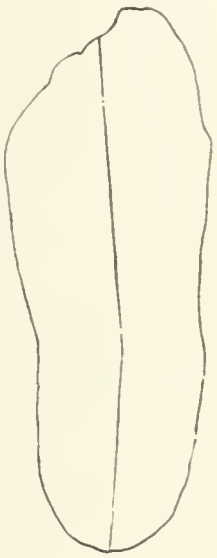

FIG. 3.

Pencil outline of a foot illustrating valgus. It shows a distinct angle at the junction of the axis of the anterior two-thirds of the foot with the axis of the posterior third, resulting from the outward bending of the foot at the medio-tarsal joint.

The mechanics of this pronated position of the foot, as it occurs in flat-foot,[3] is a subject of fascinating interest, but does not come within the scope of this paper. It is sufficient to say that the consequence of pronation is to bring the inner malleolus and the astragalus abnormally near the floor: they also stand out in bold relief, giving rise to a prominence or bulging on the inner side of the foot, which is a striking and characteristic feature of flat-foot, and has doubtless given rise to the term "weak ankles," by which it is sometimes designated. (Fig. 3.) The normal configuration of the outer side of the foot and ankle is somewhat changed, the outer border of the foot below the external malleolus standing out with unnatural prominence, and the skin below the malleolus being sometimes sharply creased or wrinkled. In severe pronation the tip of the outer malleolus is brought into contact with the outer surface of the os calcis, and the pressure and grinding at this point are sufficient explanation of the pain often felt in this situation.

2. Valgus. By this is meant an outward deflection of the anterior part of the foot in relation to the posterior part. This must not be confounded with evertion of the foot. Evertion is properly an outward rotation of the foot on its perpendicular axis; it is that position of the foot which results when, the leg being extended, the thigh is rotated outward, carrying the leg

and foot with it, the movement occurring at the hip-joint. With the knee flexed, some degree of eversion is possible without outward rotation of the thigh. In valgus the foot itself is bent; its anterior two-thirds is abducted in relation to its posterior third, the movement taking place at the medio-tarsal joint. (Figs. 1, 2, 3.)

The custom of some authors of using valgus as a synonym for flat-foot is not commendable in the writer's opinion, inasmuch as valgus is but one element of the deformity of flat-foot. Neither do I think it wise to include the deformity of valgus in the definition of pronation as is done by Lovett[1]; for even though it be granted, as that distinguished writer teaches, that valgus and pronation are necessarily anatomically associated, accuracy and clearness of description are furthered by using separate terms for distinct elements of deformity.

The third element of the deformity of flat-foot is a depression or flattening of the arch of the foot. By this breaking down of the arch the inner malleolus and the astragalus are brought still nearer to the floor than they were carried by the pronation, and when weight is borne on the foot an abnormally large area of the sole comes into contact with the surface upon which it rests. (Fig. 4.) It is this feature of the deformity which has given the affection under consideration its usual name. The term flat-foot, however, is peculiarly ill-chosen. It is very inadequately descriptive of the conditions to which it is applied, directing the attention to a single feature of the deformity, and that by no means the most important one. In many cases this element of the deformity is absent, and it seems absurd to apply the name flat-foot to a foot which is not flat. It must be admitted, however, that it is easier to find fault with this term than to suggest another that is free from objection.

These combined elements of deformity, namely, pronation, valgus and flattened arch, produce such a characteristic appearance in typical cases of flat-foot that the diagnosis is at once made by inspection. (Fig. 5.) Even when the element of flattened arch is wanting, the other features of the deformity, if well marked, produce a picture sufficiently striking to announce the nature of the condition to the eye. Difficulties of diagnosis are most apt to be encountered in incipient cases, where the deformity has not yet appeared, or is but slightly developed, or when flat-foot is associated with some other painful affection of the foot, such as metatarsalgia.

But even in such cases an inquiry into the symptoms, a thorough investigation of the history, and a careful examination will nearly always make a correct diagnosis possible. Such careful investigation is essential in all patients who complain of pain, weakness, or disability affecting the feet, for not being acquainted with other causes, they almost invariably believe their discomfort to be due to rheumatism or sprain; while in the case of children the complaint of the parents is that the child has "weak ankles," or that its feet turn over in standing and walking. Careful inquiry is further necessary in order to discover the cause of the affection, for flat-foot is frequently a secondary effect of other diseases, notably paralysis; or it may be due solely to ignorance of the right way to use the feet in standing or walking, or to the wearing of unsuitable boots; and it is impossible to treat the case intelligently or successfully without understanding the circumstances out of which the deformity has arisen.

Symptoms.

1. Pain. The most constant symptom, and that which is usually first complained of, is pain. It varies in different cases from an ill-defined uneasiness, discomfort, or sense of weariness or weakness in the feet to suffering of disabling severity. The pain is usually located on the inner side of the foot and ankle, but it may be referred to the dorsum of the foot, the centre of the heel, or even the outer side of the ankle, and may radiate up the leg and thigh. The pain is improved by rest and made worse by long standing or walking. It may or may not be increased by damp weather. It is most important, however, to bear in mind that the amount of pain does not necessarily bear a constant relation to the severity of the affection as judged by the deformity. On the one hand, slight degrees of pronation are sometimes attended by severe pain; while on the other hand, in the developed deformity, where pronation has reached an extreme degree, and is attended by marked valgus, and where the arch is broken down, the patient may be more comfortable than at an earlier stage of his complaint. Although at first sight this fact may seem strange and contradictory, it is not really difficult of explanation. It is during the time that the foot is in process of breaking down that the tension and strain upon the ligaments and the gradually changing relation of articular surfaces supply the conditions necessary to produce severe pain. When the deformity is fully developed, the foot may in time accommodate itself more or less perfectly to its new conditions, and pain may somewhat

subside. In this respect a comparison might be made with an unreduced dislocation, in which pain and discomfort become less as the joint surfaces adapt themselves to altered circumstances.

2. Tender points are of very constant occurrence. They may be looked for on the inner side of the foot a little below and in front of the internal malleolus, on the dorsum of the foot just in front of the ankle, in the centre of the heel, at the bases of the first and fifth metatarsal bones, and about the external malleolus. Of these, by far the most constant is that below and in front of the inner malleolus, and is best brought out by pressing in that situation with the thumb, the heel being fixed by the fingers of the same hand, while with the other hand the front part of the foot is twisted inward at the medio-tarsal joint; the patient is apt to wince and sometimes manifests severe discomfort.

Fig. 4.

Outline of imprint of a foot showing flattening of the arch.

3. Limitation of motion. Assuming the foot to be at a right angle with the leg, it should be capable, normally, of motion in four directions: dorsal flexion, plantar flexion, pronation, supination. The extent to which these movements can be carried normally is, of course, subject to some variation; but for practical purposes it is correct to say that the normal range of voluntary motion will be represented by ten to twenty degrees of dorsal flexion, forty to fifty degrees of plantar flexion, thirty degrees of supination, and twenty or twenty-five degrees of pronation. By passive manipulation it is usually possible to carry the movement somewhat further in all directions than can be accomplished by voluntary effort. In cases of flat-foot some limitation of these movements is the rule, the exceptions applying chiefly to children and to instances where the deformity is secondary to infantile paralysis: in the latter there may be abnormal mobility under passive manipulation. This limitation of motion may be due to reflex muscular spasm, or to adhesions, or to both causes combined, and in extreme cases the rigidity may be so great that the foot is practically fixed immovably in its pronated position. This limitation of motion gives the patient an unconscious dread of walking upon

a rough pavement, because the feet are then subject to slight jars and strains that are painful, and walking is very fatiguing when the feet have lost their power to adapt themselves to inequalities of the surface trodden upon.

4. Loss of elasticity in the gait. The patient feels that his feet have lost their "spring." He walks with his feet everted as well as pronated and in the valgus position, and the impact of the feet with the floor is inelastic, lifeless and ungraceful. If the feet are very painful, it is usual for the patient to walk without fully extending the knees, and with the body inclined forward and the shoulders drooped.

5. The patient may complain that the feet are either hot and flushed or cold and numb, and as a rule they are inclined to sweat profusely, or at least to be unnaturally damp and clammy.

6. Swelling of the feet, and sometimes of the legs, is generally present, and is especially apt to occur after long standing or walking. The feet are congested, the circulation imperfect, and as the swelling usually progressively increases during the day, the result is that by night the patient's feet are painfully compressed by boots that seemed abundantly large when they were put on in the morning.

These, speaking generally, are the symptoms of flat-foot. Of course, it must not be supposed that they are necessarily all present, or if present prominent, in every case. The affection is met with in every shade of development. There may be slight pronation which causes no complaint, and of the existence of which the patient is unaware. Or the discomfort may be moderate, the patient knowing that he has some weakness in the feet, but remaining tolerably comfortable as long as he is not called upon to stand or walk much, or do other work that puts to a test the mechanical efficiency of his feet. And so on through all grades up to the most severe, where the disability of the patient is indeed distressing.

But though it is necessary to study carefully the symptoms of each case, the most important factor in the diagnosis is the existence of one or more of the elements of deformity to which attention has been called, pronation, valgus and flattened arch. For the determination of pronation and of valgus, inspection is usually sufficient. The educated eye can quickly detect even slight departures from the normal conformation of the foot, and from its proper relation to the leg.

An examination of the shoes of the patient is interesting and

instructive. Owing to the weight falling chiefly upon the inner side of the foot, that portion of the sole of the boot is likely to show considerable wear, and the upper above the arch will be prominently bulged inward. A pencil outline of the foot, taken as the patient stands upon a sheet of paper, is useful for showing the existence of valgus: by adding the necessary lines the angle formed by the junction of the axis of the anterior two-thirds of the foot with the axis of the posterior third may be easily shown. (Fig. 3.)

Flattening of the arch can often be determined by the eye, but the best guide is furnished by an examination of the imprint of the foot as weight is borne upon it. There are several means by which this may be accomplished. A ready method is to anoint the sole of the patient's foot with vaseline, and then to have him step upon a sheet of paper. The weight-bearing portion of the foot will leave a greasy imprint upon the paper, which may be preserved by tracing the margin with a pencil. (Figs. 4, 5.) Or, by using the method described by Lovett[4, 5] who says that it was devised by Dr. H. J. Hall, a direct inspection of the sole of the foot as weight is borne upon it can be made.

The patient stands upon a glass-topped table about fifteen inches high. Under the table, and facing the light, is a mirror placed at an angle of forty-five degrees with the floor. In this mirror the reflection of the sole of the foot as the weight is borne upon it is seen very distinctly, the weight-bearing portion of the sole appearing as a dead-white anæmic area. This pressure area may be outlined with a soft pencil on the under surface of the glass, then, after the patient steps down, a permanent record may be obtained by placing a thin sheet of paper upon the upper surface of the glass, when the lines on the under surface will show through and may be traced. By either of these methods of examination abnormal flattening or breaking down of the arch may be easily demonstrated. And this study of the imprint of the foot as weight is borne upon it will further demonstrate that breaking down of the arch is far from being the most important element of the deformity of flat-foot. The imprint may show the arch to be absolutely normal in cases where the patient is practically disabled by reason of pronation and valgus. Indeed, as regards the production of symptoms, it is certain that pronation is of much greater consequence than depression of the arch. The arch may be very flat and the patient free from symptoms if the foot is not pronated.

Differential Diagnosis.

The affections for which flat-foot is most apt to be mistaken are rheumatism, ostitis of the tarsus, sprain of the foot or ankle, contracted foot, and metatarsalgia. Of these the disease with which it is most often confounded is unquestionably rheumatism. There can be no doubt whatever that scores of persons are constantly under treatment for painful conditions of the feet that have been diagnosed as rheumatism, who vainly seek relief by swallowing drugs and applying liniments, whose disability could be effectually and quickly cured by the treatment appropriate for flat-foot. In making the differential diagnosis the history of the case is important, for rheumatism of a chronic character and limited to one or both feet is not common under any circumstances, and is very unlikely to occur in a patient who has not manifested other evidences of the rheumatic diathesis. A careful study of the feet with regard to the presence or absence of pronation, valgus and flattened arch, will nearly always prevent mistake. Of course rheumatism may be associated with flat-foot, a combination that would seriously complicate the diagnosis. In any very doubtful case a trial of the effect of treatment will probably be very helpful: anti-rheumatic remedies are not likely to cure symptoms that result from a derangement of the mechanism of the foot, while the speedy amelioration of obstinate symptoms of "rheumatism" of the feet that may often be secured by suitable orthopedic treatment is a most gratifying experience.

Fig. 5.—Double flat-foot.

Ostitis of the tarsus is a much rarer condition than flat-foot. There is frequently a family history of tuberculosis, or the patient himself may be evidently tuberculous. A thickened condition of the synovial membrane, often causing a false sense of fluctuation, also thickening of the bones of the tarsus, can usually be made out by careful examination; and this enlargement is persistent, not disappearing after a few hours' rest, as does the swelling of flat-

foot. In the early stage of chronic ostitis in this region, an infallible diagnosis may occasionally be impossible, and we may be forced to watch the case and try the effect of treatment before arriving at a positive opinion.

In sprains of the foot or ankle of any severity there will be a distinct history of traumatism; but it is here necessary to utter a warning against relying too implicitly upon such history. Patients whose feet are beginning to experience the effects of over-pronation are often persistent in attributing their symptoms entirely to some trifling mis-step or over-exertion. The explanation is that there is always a number of individuals whose feet are weak and on the point of breaking down, and some insignificant injury or unusual effort is all that is necessary to set in motion a train of symptoms for the advent of which everything is in readiness.

Contracted foot is a comparatively rare condition, the pathology of which has not yet been worked out. Sometimes it is apparently hereditary, or it may affect several members of the same family. Occasionally it is associated with Dupuytren's contraction of the fingers. It may give rise to symptoms similar to those of flat-foot: but, when fully developed, the deformity it produces is so different from that of flat-foot that it need never be mistaken for this affection. Early in its history, however, before much deformity has occurred, there may possibly be some doubt about the diagnosis. The deformity characteristic of contracted foot is an elevation of the arch. In advanced cases this increased height of the arch is at once apparent to the eye. The front end of the os calcis is raised, the toes and heel approximated, and the foot shortened by being thus bent upon itself. The imprint of the sole taken by either of the methods described, will show the weight-bearing area of the heel and of the front part of the foot to be separated by an interval which does not bear any weight. There is a greater disposition to varus than to valgus; there is also a decided disposition to equinus so that the patient may be unable to bring the heel to the floor when standing erect. The first phalanges of the toes are drawn upwards and backwards, sometimes until they are perpendicular, the middle and terminal phalanges being sharply flexed.

Metatarsalgia (Morton's disease) is a painful affection of the plantar digital nerves. The pain is paroxysmal, and often intensely severe. The pain and tenderness are usually located very definitely near the fourth metatarso-phalangeal articulation, but the second or third are in some instances the affected articulations. The

painful spot is best displayed by pinching the articulation between the finger and thumb.[7] The pain may radiate to other parts of the foot, or even up the leg, and is often excited by walking, dancing or wearing narrow boots. Frequently the disease follows some injury of the foot. When occurring independently, metatarsalgia is not likely to be mistaken for anything else; but it is not seldom associated with the deformity of flat-foot, and under these circumstances, if either affection were overlooked, the result of treatment might be very unsatisfactory.

It seems incredible that the effects of flat-foot should ever be confounded with the results of disease located in the nervous system. Yet Whitman[6] says: "The appearance of weakness, awkwardness, and depression of spirits may be so noticeable that the case is sometimes mistaken for one of incurable nervous disease. One can hardly exaggerate the pitiable condition to which the sufferer from painful flat-foot may be reduced. There is something peculiarly exasperating and depressing in an affection which prevents a person otherwise in perfect health from earning his living, and the duration of the symptoms, the mistakes in diagnosis, the ineffectiveness of treatment, and the apparent hopelessness of relief, combined, have a very evident effect upon the mental and moral as well as the physical condition of the patient." Such a mistake as Whitman refers to could result only from ignorance or inexcusable carelessness.

FIG. 6.

Outline of imprint of a foot with normal arch.

Under the name erythromelalgia,[8] Weir-Mitchell has described an affection characterized by burning pain in the soles of the feet, the skin of which shows congested patches of a dull dusky red or purple color. The tenderness is so extreme that walking is impossible. Occasionally it occurs in the hands. It is not likely to require differentiation from flat-foot, but the fact that it might occur in association with the latter should be borne in mind.

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Medicine.

TORONTO GENERAL HOSPITAL.

ANÆSTHETIC REQUIREMENTS.

Instruments.	Restoratives.	Miscellaneous.
Tongue Forceps.	Liq. Amm. Fort.	Wax Candle and Matches.
Mouth Gag.	Spts. Amm. Arom't.	Towels for Friction.
Tongue Depressor.	Brandy and Whiskey.	Large Fan.
Sponge and Holder.	Liq. Strychniæ.	Hot Water Bottles, Cold Water
Tracheotomy Tube.	Ether.	Blocks or Bricks to elevate foot
Tracheotomy Knife.	Tr. Digitalis.	Ice, for rectum. [Tabl
Hypodermic Syringes.	Sol. Green Tea.	Conical Jaw Opener.
Œsophogeal Forceps.	Amyl. Nitrite Pearls.	Forced Expiration Apparatus.
Davidson Syringe.	Oxygen Gas.	Battery.

FORM TO BE FILLED IN BEFORE THE ADMINISTRATION OF AN ANÆSTHETIC.

Name ..... *Disease* .....

Age..... *Sex* ..... *Birthplace* .....

Occupation ..... *Ward No* ..... *House Surgeon* .....

Date of Admission..... *Date of Discharge* .....

Under care of ..... *Report taken by*.....

HABITS?	Alcohol.....	DISEASES?	Epilepsy .....
	Opium		Apoplexy .....
	Cocaine.....		Bright's Disease .....
	Other Drugs.		Other Diseases .....

PATIENT'S CONDITION.

Pulse before..... *during* ..... *after*.....

Circulation ..... *Heart* .....

Lungs .....

Nervous System .....

Urinary Analysis—Sp. Gr..... *Albumin*.....

Reaction ..... *Sugar* .....

Anæsthetic commenced at..... *Discontinued at* .....

Anæsthetic used ..... *Amount used* .....

State of Stomach during operation.....

Return to consciousness at.....

Date..... *Administrator*..... *M.D.*

GENERAL REMARKS.

C. O'R.

Gynæcology and Obstetrics.

CARE OF THE BREASTS AFTER PARTURITION.

The care of the breasts after parturition advised by T. Wilkins (*South. Cal. Pract.*) is briefly: Cleanliness, with as little interference as possible before labor; after labor, cleanliness, dryness and sufficient rest. If very sensitive, nipple shields; if erosions or fissures appear, balsam of Peru or silver nitrate. For engorgement or mastitis, massage and cold compression, which alone are effective, combined almost invincible.

The reviewer has found the following of decided benefit in cases of tender or irritable nipples, frequently complained of within twenty-four or forty-eight hours after labor. After each nursing wash the nipple with a saturated boric acid solution, wipe dry and apply freely on squares of lint or gauze the following ointment: Tinct. benzoin co., gtt. xx.: ol. olivæ, ʒii.: lanolin, ʒvj. Anticipate "sore nipples" by making daily routine inquiries as to the condition of the nipples, especially in primiparæ, and on the first hint of tenderness, while they are in the irritable stage—before they are actually inflamed—begin the boric acid solution and the ointment. This method at least protects them from the air and clothing. But it does more than this: it protects the patient against mastitis. If the nipples are looked after, the cases of mastitis will be "few and far between." H. T. M.

POST-PARTUM HÆMORRHAGE—DANGER OF GAUZE.

Schaeffer (*Rev. Obstet. Internat.*) agrees with those who distrust gauze as a material for uterine tampons in cases of flooding. If impregnated with iodoform or some other antiseptic, there is no danger of sepsis. If, however, it should happen, as is often the case, that the tampon fails to stimulate uterine contractions, and if when the bleeding is from a lacerated cervix the plug does not cause the torn artery to close by thrombosis, the gauze increases the danger, for it acts as a capillary drain and takes up much blood. All who have attended many labors know that the tolerance of hæmorrhage is very irregular in different subjects, and an apparently trifling loss will kill certain women. Hence the best

rule in flooding is not to allow one drop more to be shed, if possible. Gauze, above all if "absorbent"—which simply means more absorbent than commoner material—takes up many drops of blood at least. Schaeffer now uses non-absorbent gauze, prepared by impregnating it with gutta-percha. It can be mixed with iodoform or airol. By rolling it up into a ball it can be passed into the uterus, which it distends without absorbing any more blood. As a tampon the gutta-percha gauze retains its elasticity. Hence Schaeffer finds it suitable for inducing abortion.—*British Medical Journal.* H. T. M.

IDIOPATHIC UMBILICAL HÆMORRHAGE IN AN INFANT.

Averill, of Macclesfield, reports in the *British Medical Journal* a case in a full-time healthy infant. The bleeding began with oozing on the fifth day just before the cord separated. There was slight icterus and several large purpuric spots over the body. The treatment tried was pressure by means of pads, astringents, suture, underpinning, all of which for a short time seemed effectual; but in a few hours the flood invariably began again, and ended fatally on the fourth day. The blood showed no tendency to clot.

H. T. M.

IMPORTANCE AND TREATMENT OF ENDOMETRITIS.

W. P. Carr (*Virginia Med. Semi-Monthly*) attempts to explain why it is that some cases of endometritis lead to serious inflammation of the uterine adnexa, while in others the Fallopian tubes are little, if at all, affected. He believes that the danger is regulated by virulence of the germ and the degree of obstruction in the cervical canal. In the non-puerperal uterus the risk of the inflammation spreading to the tubes is little, save when the cervical canal is obstructed, or the infection gonorrhœal in nature; and, even in the latter case, it is probably the marked swelling of the cervical mucosa induced by the gonococcus that leads to the tubal extension. With regard to treatment, Carr would attend first to the general health and then employ local means, among which he regards drainage of the uterus as the most important. Gauze drainage is "worse than useless," and the Outerbridge silver drainage tube is to be preferred. The vagina must be kept aseptic by tampons saturated with glycerine and iodine. H. T. M.

Mental Diseases.

SOME CLINICAL ASPECTS OF MENTAL DISEASE.*

BY EZRA H. STAFFORD, M.B.,
First Assistant Physician, Asylum for Insane, Toronto.

In coming to a somewhat clearer understanding of the various diseases to which the thoracic and abdominal viscera are subject, it has been found that the only satisfactory method of research was in studying first the viscera themselves.

As the physiology and the minute anatomy of these viscera become more intelligently understood, it is possible, with the appliances at present at the disposal of science, to become more familiar with their pathology. And with even the present understanding of pathological change, as a basis upon which to reason, the physician has been able to proceed with his treatment in a far more intelligent and rational manner than ever before, and not in the vague and hazardous fashion until very recently in vogue. This is admirable.

In turning to the diseases of the mental apparatus, however, the physician has less cause for felicitation. There is at present a popular impression to the effect that the cerebrum is the organ in which those phenomena take place, of which the will, memory and emotions are the manifestations.

Anatomists and physiologists have time and again demonstrated in the laboratory the functions of the liver and the lungs. There is no mistake as to the true functions of the lungs and the liver. But physiologists and anatomists have not demonstrated, except by the rule of exclusion, that the cerebrum performs the physiological functions of the mind. It is certain, however, that the spleen is not the seat of will and memory. It is equally certain also that neither the gall bladder nor the thyroid gland, nor the placenta, are the seat of the emotions.

When all the known organs have thus been brought under similar review, and to the same end, the only logical conclusion is, that as the cerebrum is the only organ left, it must be the cerebrum. Moreover, it has been discovered by acute observers that

* Read before the Toronto Medical Society.

the removal of the cerebrum in man seriously interferes with the harmonious exercise of the will, memory and emotions.

The clinical sign of disease in an organ is the imperfect performance of its functions. The pathological signs are its changes in texture. In mental disease the clinical signs are the imperfect exercise of the will and emotions. The pathological signs are certain textural and chemical changes in the cerebral tissue.

The physiological functions of the mind have been studied for two thousand years by ancient and modern philosophers. For some reason the subject always seemed to present great attractions to philosophers; and often in inverse proportion to their ability to make the subject attractive to the laity. It was only recently, however, that the histology of the cerebrum became more clearly known. To take down almost any dozen works upon metaphysics —Aristotle, Descartes, Locke, Spinoza, Kant, Hamilton, and turn at random from one to another, affords a refreshing amusement to the mind fond of pleasing contrariety. The diversity of opinion held by these writers upon almost every conceivable subject which touches the action of the mind, breeds eventually in the heart of even the reverent and docile reader a feeling of dark distrust. One despairs of ever understanding thoroughly the functions of this mysterious organ, even in health—let alone the surpassingly delicate changes which take place in it during disease.

Histology has added little to the generalities of John Locke, Gent.; experimentation upon dogs and free hospital patients, very little more than histology. In disease our knowledge of the ultimate causes of cerebral disorder still rests in a state of confusion exasperating and helpless.

As the study of psychology has been for the most part empirical, so, until very recently, the study of psychiatry has been, in a similar manner, based almost entirely upon clinical manifestations.

Hippocrates has a section upon what he calls the Sacred Disease, and which appears to have been epilepsy. Saint Luke and other ancient medical writers make reference to demoniacal possessions, which, consisting as they did in the possession of devils, might fitly have been called the profane disease. The sacred disease and the profane disease do not appear to have been very clearly understood. The treatment, furthermore, appears to have been heroic, and consisted in driving the patient out of the town to shift for himself *al fresco*. There is no mention of this fresh air regimen, long continued, having been especially beneficial. In one instance

it seems to have merged into hog cholera, or something of the kind. Coming down to the present day the alienist finds at least one great grievance—I mean the loss of the old simplicity.

The beautiful simplicity in a case of intellectual disorder of declaring that the man is possessed of the devil, or that he has been stricken of the gods, and has the sacred disease: the beautiful simplicity of ejecting such a man out of doors, by way of restorative treatment, and keeping him out by way of moral duty (to the gods) is all lost.

The alienist has more than one disease now to contend with, and many hundreds of names of diseases from which to select one for the patient, and each of these names has itself many synonyms. To illustrate this consummate awkwardness of the present nomenclature, take as an example a sentence from Regis, chosen from the page where the book happens to open:

"General paralysis is a cerebral disorder, sometimes cerebro-spinal (diffuse chronic interstitial meningo-myelo-encephalitis), essentially characterized by progressive symptoms of dementia and paralysis (paralytic dementia), with which are frequently associated various accessory symptoms, and especially an insanity of the maniacal, melancholic or circular type (paralytic insanity)."

Here is the lucidity which comes with erudition. This man knows exactly what he is talking about. He is talking about insanity. That is the traditional way. Nearly all the standard writers upon the subject are equally clear of comprehension and prolific of words. A few are slightly more prolific of words.

But the complexity complained of is only in names. The treatment in Patagonia and the Central American States still remains as simple as in the days of Hippocrates, with the difference that instead of shoving the patient out-of-doors, they shove him indoors—the asylum doors.

Meanwhile the nomenclature goes on growing more and more complex. Among thorough-going alienists it is now considered both a profitable and gentle amusement to make classifications of nervous diseases. So much originality has been invariably shown in this polite accomplishment that the diligent and enthusiastic sciolist finds himself shortly in pressing need of a guide, philosopher and friend. But as often as not the guide, philosopher and friend to whom he goes, confesses in a moment of confidence that he has himself made a classification of nervous diseases which has never as yet been published, and which he at once, in the sacred

capacity of guide, philosopher and friend, proceeds to show to the beginner as a final solution to all his perplexities.

This intolerable evil of many names makes psychiatry the ridicule of the outside profession. Trivial clinical symptoms are given an importance which they do not deserve. The accidental idiosyncrasies of the patient are treated as special forms of disease. For example, one form of mental derangement has been called "Frauenschuhstehlmonomanie," or monomania of that variety which consists in stealing women's shoes.

A student of the most ordinary ability can diagnose renal disorder without serious difficulty. A chemical reagent and the microscope are all that is needed. The physiology of the kidney, its place in the physical economy, and all that concerns it, are one of the first things that a medical student learns.

But only the crudest and most shadowy conception has as yet been arrived at as to the physiology of the cerebrum. Much of the derision and much of the impatience then, with which the profession has looked to the alienist to straighten out his, and some of their, difficulties, is hardly just in the strict sense of the word. The cerebrum is almost unapproachable. It is to the kidney, as far as complexity of function goes, just about as a logical syllogism is to an ounce of urine. The specific gravity of an ounce of urine is not very hard to get at, but the specific gravity of some men's syllogisms is very hard indeed to compute.

After suggesting as I have just done, the helplessness of metaphysicians for more than twenty centuries to come to more than a cursory and superficial comprehension of the workings of the mind and the nature of its obscure functions: and after touching, as I have, upon the stupidity with which those subject to mental alienation have been treated in the past, I come back to my former assertion, and the differentiation which it suggests—the clinical signs of a disease are the imperfect performance of the functions of the organ or organs diseased, while the pathology of a disease is the textural changes in the organ itself, textural and chemical changes which, if properly understood, will, within certain limits, explain the imperfect performance of the functions of the organ.

And though the progress of cerebral pathology may have been very laudable in the last decade, yet as compared to what is still to be desired, the alienist labors under quite the old insufficiency of data. The tendency has been, therefore, to fall back upon the clinical symptoms of the pathological changes, and these are still

the final criterion in diagnosis and in prognosis and in treatment This is most unfortunate.

I spoke a moment ago of one of the monomanias. I wished to call attention to the ludicrous side of the question. The multiplication of monomanias became itself a monomania among alienists, and it was thought good to turn over a new leaf and start again. In one of the plays of Sophocles the word *paranoia* occurs. The English signification is madness or mental derangement. The word was pirated into psychiatry and the monomanias *en masse* were (as they say west of the Missouri) coralled under it.

The man who steals old women's shoes is now a paranoiac. Pyromania, kleptomania, clausomania and sitomania are gathered now together under this kindly Hellenic shelter, *paranoia*, very shortly, I am almost willing to prophesy, to go out again into the world as separate forms of paranoia.

To turn from the books to the asylum wards, and from the asylum registers of ancient date with their garnered wisdom and unintelligible nomenclature, to the patients of the present day, one sees, it must be confessed, about as much variety as a person who mingles with towards a thousand people outside the asylum walls is likely to see.

I have spoken of bile. I flatter myself that the cleverest analyst in the world could not say that for chemical reasons any preference could be given to that of Herbert Spencer over that of this very humble writer. There might possibly be some expression of preference were the product under consideration that of the cerebrum instead of the liver, in which the humility of the writer, already referred to, might serve him in very good stead. This is not an attempt at grotesque humor, but a pointed reminder —however similar the livers and lungs of a race may be, both normally and pathologically—that the mind of the individual in health and disease bears the ineradicable stamp of personality, of idiosynerasy. Trifling eccentricities in the sane excite very languid interest. Similar eccentricities in the insane are surely not deserving of the importance of special diseases.

In the wards of an asylum the manifestations of special derangement have a thousand shades and colors. Every patient has a personality of his own. Even the clinical signs which are regarded as most fixed are often lacking or much modified.

The brain tissue is subject to inflammation like all other animal tissues. It is subject to traumatism, both from agents without

and within. It is subject to various phases of degeneration also, and feels very intimately, as an organ, all the morbid changes which affect the blood and the other viscera, however remote. The microscope demonstrates this, and the clinical symptoms when reduced to the greatest possible simplicity are due either to excitation, sedation or to entire obliteration. Each case will fall under one of these heads, and the special clinical manifestations, when all due consideration has been given to idiosyncrasy and personality, are few in number.

The one great desideratum is an intelligent pathological basis for a classification of mental diseases independent of the clinical signs altogether. Then would follow a pathological basis for the method of treatment, and not the awkward empiricism at present in vogue.

But to accomplish this it is hardly fair to leave the entire onus of the undertaking to the professed alienist. The alienist is dependent to a very great degree upon the profession at large. What is more the study of psychiatry is the property of the profession outside as much as of the alienist within the asylum.

There is a great deal more insanity outside the asylum walls than there is inside. It is in the milder forms, perhaps; it is incipient, or it is incomplete, or it is merely amusing, and goes under the name of genius or eccentricity or religion or crime. That within the asylum is of the more pronounced type. A fit of mental depression is not so severe an affection as an attack of melancholia, and the power of self-control or inhibition is strong enough in most persons to prevent them from displaying their morbid delusions, and acting upon all their obsessions.

The materials, however, upon which psychiatry is to build up its more enduring fabric, are to be found in every sick-room. The time may be far distant when ideas will be as transparent and as readily analyzed as bile. The time may be far distant when the cerebrum will be understood as well as the heart or the lungs or the alimentary canal, but if the carnival of clinical phases continues in the future, as it has in the past, to be the sole foundation for the classification and diagnosis of mental derangement, that time will never come.

Ophthalmology and Otology.

A CASE OF HYSTERICAL DEAFNESS.

BY JAMES MACCALLUM, B.A., M.D.

PHŒBE S., aged fifteen years, domestic. Prior to January 5th hearing is said to have been normal. On that day she did the usual weekly washing. Next morning she was slightly deaf, by evening quite deaf: had pain in the left ear and crackling noises in the right. She gave up work, returned home, and presented herself at my clinic one week after the onset of the deafness.

The ear is capable of hearing 16 to 32,500 vibrations per second repeated as musical notes. My armamentarium consists of tuning-forks C_{-3} to C_5, *i.e.*, 16 to 4,096 v.s., and Galton's whistle, which produces about 6,000 to 60,000 v.s.

Functional examination: Right ear, neither by air nor by bone conduction did she hear any tuning-fork, Galton's whistle, the watch, nor the voice. Left ear, meatus C_2 (512 v.s.); mastoid C_2; vertex plus: Galton 11.5: watch on contact: as for the voice, a shout was necessary.

Physical examination: Right M.T. opaque, dull and retracted so that short process of malleus is alone visible. Left M.T. retracted, transparent, incus and stapes visible, posterior fold prominent, attic normal. Granulations and mucus in the naso-pharynx. Nares normal.

Catheter inflation showed moist rales in both Eustachian tubes, and improved hearing so that C_2 was heard at the right meatus. I was at a loss to account for the complete and absolute deafness in the right ear, the more so as there was no history of nausea, vertigo or subjective noises to bear out the seeming nerve defect, but as catheter inflation restored the lower tone limit so much that C_2 (512 v.s.) was heard at the meatus, I was inclined to think that the catarrhal element was added on to some pre-existing and old nerve defect, or that the change in the intra-tympanic pressure had altered the labyrinthine pressure, or else that I had chanced to stumble across an auditory paralysis without vertigo, nausea, or subjective noises—a condition described by Politzer. The elevation

of the lower tone limit, reduction of the upper, and the diminution of bone conduction in the left ear I accounted for in the same way.

Not confident at all of my diagnosis, and uncertain whether there had not been deafness previous to the attack, I had recourse to catheter inflation and Blaud's pill, because of the marked anæmia. After one week of this treatment there was improvement in both air and bone conduction in both ears. Right ear, meatus C_2 (512): mastoid C_2: watch contact. Left ear, meatus C, C_2, C_5 (128 to 4,096 v.s.): mastoid C, C_2; watch $\frac{2}{60}$: vertex plus. The history was given that the improvement lasted for a few hours after inflation and then passed off. She was then put in charge of the house surgeon for further treatment. As after some weeks she had not improved, I, on March 2nd, examined her and found that in the right ear there was again complete deafness for voice, watch, acoumeter, Galton's whistle and the tuning-fork, while in the left ear, watch $\frac{2}{60}$: Galton 4.3: meatus C_2, C_5: mastoid C, C_2, C_5, and acoumeter, rinne minus, vertex plus. Catheter inflation caused C_5 to be heard at the right meatus but had no effect on the left.

During this examination I noticed that, once or twice when I had chanced to drop my voice, she did what I told her, and it flashed upon me that the young lady had "done" me beautifully. I wound the ear probe with cotton and found that on touching the drum membrane with it there was no flinching, while like pressure on the left M.T. evoked vigorous protest. Further examination showed anæsthesia and analgesia of the right side of the head, auricle, face, neck, mucous membrane of nose and mouth (conjunctiva not tested), of right hand and forearm, and right leg, but not of the thigh, thorax nor abdomen, faucial reflex absent. Taste affected for sugar but not for salt. Smell not tested. No ocular symptoms, visual acuity, field and color sense normal. Temperature sense absent for heat, as tested with test tubes of hot and cold water. No motor paralysis: knee-jerks well marked: no ankle clonus; no tremors; no spinal tenderness. Tenderness on pressure in left infra mammary and ovarian regions. These anæsthetic symptoms varied from day to day, being now present now absent, but never transferred to the other side. Her hearing steadily improved, and her anæsthesia disappeared under the influence of drachm doses of Tr. assafœtida and suggestive assurances that on the next visit she would be able to hear such and such sounds. To-day, March 16th, both ears had practically normal air and bone conduction, and there was no defect in the tone limit.

In this case it was impossible to obtain any history of fright, worry, menstrual disturbance, or any other sufficient exciting cause. She liked her situation and was anxious to return to it. At home she would cry about her deafness, and protest that she would rather die than live in such a condition. I cannot think that she was consciously pretending deafness, but rather that there was what may be called a torpor of the auditory apparatus, which caused the deafness. She betrayed audition in some few small points. When testing her vision, I stood so that she could not see my face, and asked her in a very low tone of voice to read the last line, which she did at once. If I asked her something when she was standing with her back to me so that she could not see me, she would not turn her head to me, but a look of inquiry would come into her face, and she would ask her sister what was said. Sudden loud and unexpected noises made behind her never startled her or even caused her to turn her head.

In consulting the authorities one cannot but be struck with conflict of opinion between the neurologists and the otologists as to the frequency of hysterical deafness. While Politzer says "deafness of undoubtedly hysteric character is very seldom met with, perhaps even more seldom than hysterical amblyopia," such neurologists as Hirt and Gowers describe it as frequent. Gowers says that loss of hearing is common in hysteria as part of hemianæsthesia, and that bone is affected more than air conduction.

One easily understands that there is no good reason why the nerves of special sense should not, just as readily as the nerves of ordinary sensation, be attacked by anæsthesia.

The statement made by Hirt, that the nerves of smell and hearing are more frequently affected than those of sight or taste, conflicts with what I believe to be the prevalent idea as to their relative frequency. If the defect of hearing be, as Gowers says, in bone conduction, it may not be noticed by the patient, and may readily escape detection by the physician, but if it be for the voice, it should at once attract attention. A patient may be quite unaware of the presence of anæsthetic areas, or even of complete hemianæsthesia: but impairment of the sense of hearing would escape notice less easily even than the ocular manifestations, *e.g.*, the limitation of the field, the defective color sense, or impaired visual acuity.

Gowers and Politzer are one in saying that hearing is seldom affected alone, and that there is usually anæsthesia or hyperæsthesia

of the other special senses—in this case, of hearing and taste. One hears of laryngeal hysteria very frequently, and yet only in Grüber do I find recorded simultaneous involvement of voice and hearing.

Hysterical deafness occurring in a patient in whom other hysterical phenomena, contractures, paralysis or convulsions, have been previously observed, is, perhaps, comparatively easy of diagnosis. When it is the first of the protean phases of the disease, when it attacks both ears, is associated with catarrhal deafness, as in this case, and improves under treatment directed to the catarrh, one may easily be led astray. Usually it does not gradually disappear, but suddenly, often being transferred to the other ear.

That the hysterical deafness should be added to the catarrhal is not surprising, as the latter had rendered the ear a point of less resistance.

Pharmacology and Therapeutics.

TREATMENT OF ECLAMPSIA.

Halbertsma (*Wien. Med. Woch.*) attributes the differences of opinion in respect of the treatment of eclampsia to comparison of the number instead of the nature of cases. The prognosis varies greatly with the time at which the symptoms come on: remedies which are effectual in post-partum eclampsia are useless when the manifestations appear towards the end of pregnancy. It is with the latter class of cases that the author particularly deals, and of them he analyzes forty-eight—thirty occurring in the latter period of gestation, the other eighteen at the beginning of labor. Of these forty-eight cases the prognosis in twenty-six was extremely grave: ten of them were actively treated, the remaining sixteen not. Of the former recovery resulted in eight instances, of the latter in only one. This corresponds to the results recorded by Zweifel, who, out of twenty-two actively treated severe cases lost but two. Halbertsma hence considers that such cases occurring in the last three or four months of pregnancy or at the beginning of labor indicate more radical treatment than is commonly employed. Active interference is required in all cases where the pregnancy has lasted eight months, and in all others in which two doses of 1-30 gr. of morphine have proved ineffectual. In such circum-

stances the prognosis is much worse if the patient is left alone than if Cæsarean section is performed; by the procedure the author reckons usually to save both mother and child. Döderlein has published nineteen cases so treated; in eleven success was complete, in the other eight the mother died. In two of the fatal cases the eclampsia was complicated by apoplexy and miliary tuberculosis respectively, while three were in extremis when operated upon; the number of instances in which the operation failed to avert a fatal issue is thus reduced to three. Since Döderlein's paper, out of three cases treated by Halbertsma's method, two have recovered. Dührssen prefers to operate by deep incisions into the cervix, but this results, according to Zweifel's statistics, in an infantile mortality of sixty-one per cent., so that the author prefers Cæsarean section whenever the cervix is not dilated. Whatever view may be taken of the pathogeny of eclampsia there is no doubt of the causal relation of pregnancy, and the first indication in a dangerous case is therefore to terminate this condition. A. J. H.

Adipogen—A New Method of Taking Cod Liver Oil.

Adipogen is a preparation of cod livers, the subject of a patent. It is exported from Norway. The specification indicates that the following is the process: "Fresh cod livers are cleaned with sterilized water and boiled in salt solution in vacuo at a low temperature without breaking the cells." A pasty mass results, which, on chemical examination, is found to contain half its weight of cod liver oil. It is of a granular consistence with a pleasant fishy odor suggestive of anchovy paste. It is convenient for administration to children spread on bread and butter. Adults may take it by the spoonful. A. J. H.

On the Restriction of Meat in the Treatment of Psoriasis.

L. Duncan Bulkley, of New York, in a paper read before the third International Congress of Dermatology held in London, August 7th, 1896, reports the most satisfactory results in the treatment of this most obstinate disease by the restriction of the nitrogenous elements of food, especially such as are found in strong meats and their equivalents. Of course the usual local and constitutional remedies are used when indicated.—*Medical Record*, January 9th, 1897. A. J. H.

Public Health and Hygiene.

MONTHLY REPORT OF CONTAGIOUS DISEASE IN ONTARIO FOR FEBRUARY, 1897.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

		Total Reported.	Per cent. of Whole Reported.
Total population of Province	2,233,117	1,421,235	64
" Municipalities	745	457	61
" Cities	13	13	100
" Towns and Villages	236	129	55
" Townships	496	315	63

VARIOUS DISEASES REPORTED.

Municipality.	Pop. Reported	Typhoid.		Diphtheria.		Scarlatina.		Tub'rcul'sis	
		Cases.	Rate per 1000 per Annum	Cases	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum
Cities	429,399	5	.1	46	1.0	13	.3	68	1.9
Towns and Villages	256,814	3	.1	8	0.3	1	.04	21	0.9
Townships	735,022	3	.05	21	0.3	1	.01	48	0.7
Total Pop. Reported	1,421,235	11	.09	75	0.6	15	.1	137	0.9

P. H. B.

Privy Pits.

"It is not asserting too much to declare that our privies are the most dangerous enemies of our lives and happiness. The contents of these abominable receptacles have free access to the soil, and saturate the ground with liquid filth to such a degree that specimens of sub-soil water taken from different depths and in different sections yield a large percentage of organic matters, the products of animal excretion. Many of them overflow, and the liquid contents flow into yards and gutters, emitting most offensive odors, which are a fruitful source of disease, operating indirectly in its production and directly in lowering the vital stamina of the unfortunates compelled to breathe a polluted atmosphere."—From Maryland State Health Report. E. H. A.

The Canadian Journal of Medicine and Surgery

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VOL. I. TORONTO, APRIL, 1897. NO. 4.

Editorials.

DIPHTHERIA AT THE TORONTO ISOLATION HOSPITAL.

THE annual report of the LOCAL BOARD OF HEALTH of Toronto for 1896 contains some interesting information respecting the prevalence of diphtheria in this city during the past year, the number of cases treated at the hospital, and the mortality—ordinary treatment having been used in nearly all the cases. A total of 562 cases were reported to the Health Office, requiring 8,866 inspections, or an average of 15.77 in each case.

It is quite certain that all the cases occurring in the city were not reported, but the exact number in which default was made is not ascertainable. There were 388 admissions to the hospital for diphtheria during the year. This would leave only 174 cases to be treated in private practice or in other hospitals.

It is certain, however, that this incompleteness in reporting diphtheria will not occur in 1897, for as every burial certificate issued in the municipality has to be countersigned by the Medical Health Officer, he necessarily becomes acquainted with the ascribed cause of death in each case, and is thus made aware of any negligence on the part of the attending physician in not reporting a case of contagious disease to the Health Office during the illness which preceded death.

At the Isolation Hospital a bacteriological test is made in every case. Of the 388 cases admitted, thirty-six were thus proved to be non-diphtheritic, and the record confined to 352 cases. These cases are subdivided as follows :

Tonsillar	175
Tonsillar-pharyngeal	50
Pharyngeal	3
Naso-pharyngeal	81
Laryngeal	32
Laryngo-naso-pharyngeal	11
	352
Total mortality	52 = 14.77%
Moribund on admission	14
Real mortality after treatment	38 = 10.79%

There were thirty-two cases of purely laryngeal diphtheria during the year. Of these only nine died, and of the nine, all but one were moribund when admitted. Of the cases which were moribund when admitted, eight were laryngeal, nine naso-pharyngeal and one laryngo-naso-pharyngeal.

It may be concluded, therefore, that a mild type of diphtheria prevails in this city. As further proof of this fact, Professor Shuttleworth, the bacteriologist of the Local Board, states that the city hospital register of 1,506 cases for four years up to December, 1895, shows a mortality of 18.52 per cent. The Metropolitan Asylums Board Statistics, 1888–94, give a death-rate of 30.3 per cent., and in the hospitals of continental Europe the mortality is much higher. The Toronto statistic seems to indicate either that the

bacilli of diphtheria are less virulent in this city than in European countries, or that the resistance of the patients is greater.

Special reference is made to the fact that owing to a more energetic employment of steaming and of calomel sublimation in the treatment of laryngeal diphtheria, a remarkable diminution of the mortality has taken place in that very fatal form of the disease.

Though not referred to in the report, we have learned that antitoxin was used in only twenty-two cases, which were of the laryngeal and laryngo-naso-pharyngeal types. No curative results were obtained. Dr. Sheard states that he will continue to use antitoxin only in severe cases, as the results obtained at the Toronto Isolation Hospital demonstrate, in his opinion, the sufficiency of ordinary treatment in the milder cases of diphtheria.

We herewith submit a statistic, recently compiled at Paris, showing the results of antitoxin treatment by several observers, in different parts of the world :

	Cases.	Deaths.	Mortality Per cent.
Heubner, of Berlin	3,036	625	20.6
Monti, of Vienna	3,888	716	18.4
Crandall, of St. Louis	2,652	442	16.8
Forster, of Washington	2,740	509	18.5
Eulenburg and Schwalbe, of Berlin	5,833	559	9.6
Welch, of Baltimore	7,166	1,239	17.3
Imperial Institute, of Berlin, first six months of 1895	2,228	386	17.3
last six months of 1895	2,130	306	14.3
Hilbert, of Konigsberg	7,663	1,282	16.6
Paltauf, of Vienna	1,207	138	11.3
Loddo, of Japan	10,000	1,800	18
American Society of Pediatrics	5,794	713	12.3
Total	54,317	8,715	16.1

The most favorable percentage of mortality quoted in this statistic, 9.6 per cent., obtained by Eulenberg and Schwalbe, of Berlin, is the only one superior to that obtained last year at the Toronto Isolation Hospital. The percentage of mortality at the Toronto Isolation Hospital for a term of years, 1891–94, namely, 18.52 per cent., is, however, higher than the total mortality quoted above, 16.1, and it seems reasonable to think that if antitoxin could have been used, under suitable conditions, at the Toronto Isolation Hospital during the four years referred to, a more favorable showing would have

been obtained. We understand, however, that one of the most important conditions has rarely been obtained. Cases are not sent to the Isolation Hospital at the first onset of the disease. Often they arrive during the second week, when the patient is poisoned not only by the Klebs-Loeffler bacillus and its membrane toxins, but also by the toxins of the tissues of the body. Now, antitoxin is an antidote to the former, but can have but little influence over the latter.

Recognizing these facts, it would seem that a duty devolves on the private practitioner as well as the medical attendant of the city Isolation Hospital. A physician called to see a suspicious case of tonsillitis, in the first stage, should, after isolation, promptly apply a swab to the patient's throat, and send the swab to the bacteriologist for diagnosis. If his examination confirms the practitioner's suspicion the case should be reported, antitoxin used, and the bacterial fire extinguished as soon as possible. Should the parents object to antitoxin, they take the responsibility of the case from the practitioner's shoulders, and he can then confine himself to treating the symptoms.

If a case, when in the first stage, is removed to the Isolation Hospital, the same method of treatment should be followed. If the patient is not sent to the hospital until grave symptoms have developed, such as laryngitis, stupor, or serious exhaustion with threatened sudden death, it would be unreasonable to expect a miracle to result and that the deeply-poisoned body of the patient can be restored to health by antitoxin.

To use antitoxin as a last resource, or when there is small hope of cure, is really to invite defeat. Should a catastrophe occur, some may ascribe it to antitoxin, instead of a much more probable cause, the presence of tissue toxins in large quantities, which undermine the vital organs, producing serious exhaustion and sudden death. J. J. C.

BLEEDING—TRANSFUSION.

One notices, here and there, in current medical literature, a tendency to return to the old doctrines in medicine, which prevailed half a century ago, when every doctor carried a lancet and was nothing loath to use it. The apostles of the new movement, however, are willing to give as well as take, only instead of returning blood for blood, they remove from seven to fourteen ounces of

blood and then inject into the veins or subcutaneous tissues an equal quantity of a physiological (75%) solution of common salt.

This treatment is recommended in uræmic convulsions, pneumonia and Asiatic cholera; it might also be tried in cases of blood poisoning arising from the inhalation of illuminating gas.

The theory underlying this treatment is, that a bleeding of from ten to fourteen ounces removes a certain amount of whatever poison may be present in the patient's blood. That a virulent poison is present in the blood of a patient attacked with cholera, has been demonstrated by biological experiments performed on animals. The same observation holds true in pneumonia and uræmia.

Admitting that it is quite correct to remove a poison from the blood, is it wise to remove all the utilizable material contained in the blood, which is taken away at a time when the patient requires all his strength to fight against the disease?

Dr. Bosc, of Montpellier, considers this a mere sophism, and quotes the experience of Annesley and other English surgeons in India to show that, in treating cholera, bleeding, instead of causing syncope, improved the pulse and removed the feeling of weakness and stifling. He quotes an observation of a case, in which the pulse oscillated between 120 and 130 before bleeding, was irregular and intermittent, but fell to 110, 100, and finally 96, becoming also quite regular and free from intermission. The breathing also became more easy and regular.

He also contends that in grave infectious diseases, such as cholera and enteric fever, there is an intense poisoning of the blood, which, in its turn, produces a great dilatation of the capillaries, especially those of the intestines, followed by ecchymoses, hæmorrhages and ulcerations: a fall in blood pressure; a direct degenerative action in the parenchymas, which are indispensable to the regulation of the organic functions, viz., the liver and the kidneys, while at the same time a blow is struck at the activity of the blood-forming and nutritive organs, such as the lymphoid tissues in general. The immediate effects of bleeding are to diminish the quantity of poison in circulation, and consequently, the general symptoms of poisoning, capillary leakage, weakness of the pulse and difficulty of breathing. Dr. Bosc contends that these results are regularly obtained after a free bleeding in attacks of uræmia, eclampsia, some forms of typhoid fever, and certain forms of blood poisoning, no matter what the general condition of the patient may be.

Does bleeding injure phagocytosis? Dr. Bosc says that, on the contrary, instead of diminishing the leucocytes, bleeding produces a real hyperleucocytosis. The next day after a bleeding, the white blood cells are doubled or tripled in number.

In Dr. Bosc's opinion, the use of a saline injection after bleeding removes all objections to the operation. The salt water dilutes the poison which remains in the blood, strengthens the red blood cells, fixes their hæmoglobin, diminishes the globulocide power of the blood serum, and besides exerts a very intense action on the blood-forming organs and nutrition in general. It also raises blood pressure, stimulates diuresis, and may produce a real immunity against coli-bacillar infection.

Dr. Bosc concludes that the fears of diminishing vital reaction by bleeding are groundless, for the consecutive saline injection produces powerful organic reactions, which he considers critical and salutary. These are chill, profuse perspiration, hyperpyrexia, diuresis and modifications of the respiration and circulation, which are always the same, no matter what the disease may be, and are intrinsically valuable as vital phenomena, constituting a process of defence against disease.

It may be well to mention also that the subcutaneous injection of a saline solution is as useful as an intravenous one, has the same effects, and is certainly less risky and less difficult of execution.

J. J. C.

ASSOCIATIONS TO DRIVE DOCTORS OUT OF EXISTENCE.

THE following editorial appeared recently in the *Alkaloidal Clinic*, and which we consider well worthy of reprint. It shows the adverse conditions under which decent members of the profession have to attempt to exist in Chicago:

I am told that in Chicago there has been formed a company that guarantees to subscribers medical treatment in a hospital, free drugs, etc., on payment of a certain sum monthly. This is not a club, but a commercial company, that assumes all the risks and pockets the profits. The company comes out boldly and advertises for customers as openly as any quack in the advertising business. Among other things it offers a "sure cure" for hernia. No pretense at charity is made, no restriction to the poor appears in the advertisements. A millionaire can enter his name and obtain his medical advice, including hospital service, for the sum of $6 a year.

What the effect of such a movement will be upon the medical profession is not difficult to foresee. What with the hospital, the dispensary, the specialist, the practising druggist and the advertiser who persistently thrusts his wares into the patient's hands, the doctor is pretty well surrounded, his business reduced to a minimum, his emoluments shorn and clipped until we are compelled to ask, "How under the shining sun does he make his living?"

The answer is unfortunately an easy one: He don't make it. Aided by outside resources, by farm or interest in mercantile operations, or by other non-professional sources of income, he manages to exist: but many thousands of doctors do not realize from their practice enough to support themselves and their families.

There is just one vantage ground remaining, and that is the confidence which our patients have in us personally. So long as such schemes are presented simply in their commercial aspect by men who, as physicians, are nobodies, the good sense of the patient will prevent his entrusting his health to such hands, in preference to the doctor in whose good faith, honor and skill he has confidence. But when the day shall come in which physicians of note lend their names to such an enterprise, it will be the most disastrous blow as yet struck at the medical profession. If for fifty cents a month a patient can secure the services of men who have an accepted rank and standing among the leaders of medicine and the endorsement of men high in the profession, what chance has the unfortunate family doctor?

Men forget how much of their success they owe to the profession. The heritage from centuries of workers, who have each helped to come at the truths of our science and given the results of their labors to us freely, constitutes a trust fund which we, the present possessors, are in honor bound to transmit to our successors. We are custodians, not owners.

Our surgeons and other specialists owe much of their skill and their income to the family practitioners, who send their patients to them. It would be base ingratitude for such men to stab their benefactors, by endorsing any such scheme to deprive them of their livelihood. Let the first prominent man who lends his name to any such enterprise be made to feel that the amount he realizes from it is the price paid him for his place in the estimation of the medical profession, and that he cannot have cake and penny both. I doubt if there are many men of real worth who would care to defy the united voice of the profession in such a matter.

W. A. Y.

"ANÆSTHETIC REQUIREMENTS."

At page 154 we reproduce a printed form, recently introduced by Dr. O'Reilly, the Medical Superintendent of Toronto General Hospital. It is intended for the use of the Hospital physicians: but if referred to by a practitioner when about to give an anæsthetic, would serve a useful purpose, by reminding him of the instruments, restoratives and miscellaneous requirements which he should have at his command.

The form, to be filled in before the administration of an anæsthetic, shows that an enquiry is made into the habits of the patient with respect to alcohol, opium, cocaine and other drugs, and also certain diseases, such as epilepsy, apoplexy and Bright's disease.

A report is also made of the patient's condition, the pulse before, during and after the administration of the anæsthetic, the state of the circulation, the heart, the lungs and the nervous system. A urinary analysis is also called for.

A record is kept of the time when the anæsthetic was commenced and when it was discontinued, the kind of anæsthetic used and its amount, the state of the stomach during the operation and the time when consciousness returned. The form is then dated, and signed by the administrator.

As the forms which have been filled up will be preserved and registered at the Hospital, they will prove useful to future medical writers who may wish to study the merits and demerits of a particular anæsthetic with the varying habits and previous diseases of patients who have been subjected to its influence.

From the standpoint of method and improved accuracy of observation, much may be said in its favor. A private practitioner, for many obvious reasons, would do well to keep such a record of each case in which he has administered an anæsthetic.

J. J. C.

The Seventeenth Annual Meeting of the Ontario Medical Association will be held in the building of the College of Physicians and Surgeons, Toronto, on the 2nd and 3rd of June. Already a large number of papers have been promised, and the meeting promises to be one of the most interesting held for years back.

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Opium Addiction; Is It a Disease? Wm Huntley, M.A., M.D. (49)
On So-Called Idiopathic Dilatation of the Large Intestine. C. F. Martin, B.A., M.D. (11)
On the Difference Between Serum and Blood Solutions, etc. W. Johnston, M.D.; D. D. MacTaggart, M.D. (11)
Old Truths Vindicated: Animal Magnetism Od, and Hertzian Long Waves. Leon L. (46)
Otology, Diseases of the Auditory Canal. P. E. Howes, M.D. (15)
Œsophagotomy, A Successful Case of External, for Tooth Plate Twenty-two Months Impacted in the Œsophagus. W. T. Bull, M.D.; J. B. Walker, M.D. (1)
Otitis Media Serosa, or Sero-Mucous Catarrh. S. C. Ayres, M.D. (20)

On the Replacement of a Depressed Fracture of the Malar Bone. R. F. Weir, M.D. (1)
Ocular Conditions in the Relation to Constitutional States. Gertrude Walker, M.D. (14)
Operative Surgery at the City Hospital; Study of Wound Infection. P. H. Hiss, M.D. (1)
Ovarian and Uterine Neoplasms, History and Treatment of. A. G. Dale, M.S., M.D. (24)
Occupation Neurosis, An Uncommon Case of. J. W. McConnell, M.D. (12)
Operation for Excision of the Knee. C. B. Lockwood, F.R.C.S. (2)

Progressive Muscular Atrophy in the Young. W. S. Stowell, M.D. (3)
Physiological Points in Therapeutics. J. Adolphus, M.D. (38)
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Progress of the Healing Art. H. L. Bartlett, M.D. (30)
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Plague, The; Its Germ and Transmission E. F. Willoughby, M.D.; A. H. Doty, M.D.; W. Wyman, M.D. (27)
Posture in the Diagnosis of Disease. 12 illustrations. R. H. Sayre, M.D. (31)
Primary Carcinoma of the Gall-Bladder. G. Fulterer, M.D. (17)
Personal and Domestic Prophylaxis. J. D. Blake, M.D. (5)
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Principles that Govern Exercise. A. J. Sanderson, M.D. (42)
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"Parasites" in Cancer. H. J. Stiles, M.D. (7)
Puerperal Eclampsia, Its Etymology and Treatment. W. W. Potter, M.D. (50)
Pathology of the Lymphadenoid Structures. W. G. Spencer, F.R.C.S. (37)
Pathology and Surgery of Intussusception. D. A. Power, F.R.C.S. (37)
Porro's Operation, A Successful Case of. Dr. Keeling. (37)
Perichondritis of the Nose. G. Kicer. (20)
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Recent Advances in Obstetrics; The Walcher Posture in Labor. T. G. Comstock, M.D. (38)
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Regeneration of Bone from Periosteum. H. F. Thompson, M.D. (17)
Remarks on the Technique of Analysis of Small Quantities of Urine as Obtained by the Ureter Catheter. F. E. Sondern, M.D. (3)
Results of a Bacteriologic Investigation of the Nasal Mucus in One Hundred Cases of Chronic Nasal Discharge; Reference to the presence of the Klebs-Loeffler bacillus. E. L. Vansant, M.D. (12)
Renal Tuberculosis. F. T. Brown, M.D. (3)

Successful Skin Grafting on an Exposed Pleura Costalis. J. M. Duncan, M.D. (38)
Surgery of the War, 1861 to 1865. J. G. Thompson, M.D. (22)
Skiagraphy, The Present and Future of. O. L. Schmidt, M.D. (17)
"Schott Method" of Gymnastics in the Treatment of Chronic Disease of the Heart. S. Solis-Cohen, M.D.; C. M. West, M.D. (12)
Surgical and Medical Uses of the Peritoneum. B. Robinson, B.S., M.D. (45)
Sun Stroke. A Report on Case of, During Summer of 1896. N. R. Norton, M.D. (3)
Should Physicians be Paid for Returns of Births, Deaths and Diseases? G. H. Rohé, M.D. (5)
Some Practical Thoughts on the Development of the Human Race and Obstetric Nursing. R. R. Kime, M.D. (4)
Some Interesting Cases of Skin and Venereal Disease. B. Wolff, M.D. (4)
Small-Pox Statistics. S. Coupland, M.D. (2)
Syrups for Soda Fountain. W. K. Webber. (32)
Sketches by Dan, Van, Den. (32)
Some Irregular Medical Practices. C. C. Mapes. (21)
Serum Test, The Application of, to the Differential Diagnosis of Typhoid and Malta Fever, etc. A. E. Wright, M.D. (2)
Suggestions for the Symptomatic Treatment of Skin Diseases. C. W. Cutler, M.D. (3)
Study of Cough Due to Irritation in the Upper Air Passages. C. N. Cox, M.D. (20)
Sarcoma of the Breast. P. Findlay, M.D. (36)
Symptoms, a Study. S. Close, M.D. (51)
Simulated Amblyopia; Malingering Blindness. W. L. Bullard, M.D. (33)
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Subcutaneous Injection of Salt Solution. G. S. Brown, M.D. (3)
Some Fallacies in Regard to the Singing Voice Exposed. F. S. Muckey, M.D. (26)
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Senility, Senile Dementia, etc. G. H. Hill, M.D. (21)

The Abdominal Brain and Automatic Visceral Ganglia, Physiologia and Anatomic Considerations. B. Robinson, M.D. (38)
The Quick and the Dead. J. D. Todee, M.D. (38)
The Therapeutic Action of Orphol Beta Naphthol-Bismuth. G. Oliner, M.D. (18)
Typhoid Fever, Experiences in the Antiseptic Treatment of. C. H. Richmond, M.D. (22)
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Tatooing in a Child, A Case of Accidental. G. Bieser, M.D. (31)
Tuberculosis and Cardiac Alcoholism. A. E. Tussey, M.D. (49)
"Tic Convulsif," A Peculiar Form of Family. F. G. Finley, M.D. (11)
The Treatment of Rheumatic Affections by the Tallerman Sheffield Air Apparatus. J. Stewart, M.D.; W. J. Reilly, M.D. (11)
The Cause and Treatment of the So-Called Sexual Neuroses of the Male. B. G. Carleton, M.D. (46)
The Essentials of Modern Materia Medica and Eclectic Therapeutics. (15)
The Semi-Centennial of the New York Academy of Medicine. Oration delivered by A. Jacobi, M.D. (1)
The Dispensaries of New York City, their Use and Abuse. W. B. Bronner, A.M., M.D. (1)
Traumatic Perforation of the Membrana Tympani. L. S. Somers, M.D. (12)
Two Cases of Mammoth Sarcoma. E. R. Axtell, M.D. (3)
The Treatment of Diphtheria. J. B. Stair, M.D. (3)
Typhoid Fever, Pathology and Bacteriology of. T. E. Livingood, M.D. (5)
Transfusion, A Simple Method of. H. P. Cooper, M.D. (4)

The Ethical Relations of the Railway Surgeon. H. B. Hemenway, M.D. (9)
The Development of the Child as Modified by the Condition of his Eyes. W. F. Southard, M.D. (26)
The Hospital, the Doctor, and the Community. E. Jackson, M.D. (14)
The Technique of Blood Study, Experiments in the Physiological Chemistry of Leucocytes; Study in Cell Tissues, their Significance in Tuberculosis. A. M. Holmes, A.M., M.D. (1)
Traumatic Intrathoracic Rupture of the Trachea without Fracture of the Chest Wall. C. A. Lane, M.D. (2)
Typhoid Fever, Outbreak of Traced to Specific Pollution of a Water Supply. J. C. Thresh, M.D. (2)
Typhoid Fever, The Treatment of. G. C. VanWart, M.D. (28)
Twin Pregnancies, Management of Labor in. Prof. Stephenson. (7)
Trained Nurse, The Relations of the. J. Bell, M.D. (7)
Trade-like Movements in Head Injuries. A. Miles, M.D. (7)
The Range of Medical Gymnastics. W. F. Somerville, M.D. (7)
Turbinotomy and the Spokeshave. F. C. Ewing, M.D. (20)
Tuberculosis, Methods of Diagnosis in. W. A. Evans, M.D. (36)
Tuberculosis in the Lower Animals. W. G. Houck, M.D. (36)
Typhoid Fever, Remarks on. E. Lee, M.D. (33)
The Specialist and the General Practitioner. J. E. Sawyer, M.D. (33)
The Technique of Prof. Keen's Surgical Clinic in the Jefferson Medical College Hospital. T. L. Rhoads, M.D. (24)
The Newspaper, the Profession, and the Quacks. S. S. Towler, M.D. (14)
The New Artillery and the Change of Management Introduced by it into War Surgery. E. Andrews, M.A., LL.D. (34)

Uterine Displacements, Some Clinical Observations on. O. B. Will, M.D. (40)
Uncommon Affections of the Eyelids. J. H. Egbert, A.M., M.D. (12)
Unnas' Dressing. C. E. Ide, M.D. (12)

Vertebra, Fracture and Dislocation of the Third Lumbar. J. W. Chisholm, M.D. (38)
Varicose Ulcers. J. J. Smith, M.D. (38)
Vital Statistics. C. L. Mattfeldt, M.D. (5)
Virtual or Relative Mitral Stenosis. H. D. Rolleston, M.D. (2)
Vaccination in the Light of the Royal British Commission. R. R. Leverson, M.D. (51)

Warts, Retained Placenta. C. A. Hillweg, M.D. (38)
Water, Chemical Examination of Drinking. W. B. D. Penniman, A.M., Ph.D. (5)

Xeroform (Tribromphenol Bismuth) in Minor Surgery. T. Beyer, M.D. (41)

W. A. Y.

Key to Medical Publications.

1. Medical Record, N.Y.
2. The Lancet, London, Eng.
3. New York Medical Journal.
4. Atlanta Medical and Surgical Journal.
5. Maryland Medical Journal.
6. Medical Summary, Philadelphia.
7. Scottish Medical and Surgical Journal, Edin.
8. Journal of Medicine and Science, Portl., Me.
9. The Railway Surgeon, Chicago.
10. Archives of Pediatrics, N.Y.
11. Montreal Medical Journal.
12. Philadelphia Polyclinic.
13. International Journal of Surgery, N.Y.
14. Medical and Surgical Reporter, Philadelphia.
15. American Medical Journal, St. Louis, Mo.
16. Medical Bulletin, Philadelphia.
17. Medicine, Detroit.
18. New England Medical Monthly, Danbury, Conn.
19. Canadian Medical Review, Toronto.
20. The Laryngoscope, St. Louis.
21. The Medical Age, Detroit.
22. Buffalo Medical Journal.
23. Cleveland Medical Journal.
24. The Therapeutic Gazette, Detroit.
25. Langsdale's Lancet, Kansas City.
26. Pacific Medical Journal, San Francisco, Cal.
27. American Journal of Medical Science, Phila.
28. The Maritime Medical News, Halifax.
29. The State Hospitals' Bulletin, Utica, N.Y.
30. Brooklyn Medical Journal, N.Y.
31. Pediatrics, N.Y.
32. Bulletin of Pharmacy, Detroit.
33. Magazine of Medicine, Atlanta, Ga.
34. North American Practitioner, Chicago.
35. St. Louis Medical and Surgical Journal.
36. Chicago Medical Recorder.
37. Medical Press and Circular, London, Eng.
38. Medical Brief, St. Louis.
39. Columbus Medical Journal, Columbus, O.
40. Chicago Clinical Review, Chicago.
41. The American Therapist, New York.
42. The Pacific Health Journal, Oakland, Cal.
43. The Diabetic and Hygienic Gazette, N.Y.
44. La France Medicale, Paris.
45. Medical Standard, Chicago.
46. The Medical Times, New York.
47. La Presse Medicale, Paris.
48. Le Progres Medical, Paris.
49. Quarterly Journal of Inebriety, Hartford, Conn.
50. American Journal of Surgery and Gynæcology, St. Louis.
51. The Homœopathic Physician, Philadelphia.

The Physician's Library.

An Account of the Life and Works of Dr. Robert Watt, author of "The Bibliotheca Britannica." By JAMES FINLAYSON, M.D., Physician to the Glasgow Western Infirmary and the Royal Hospital for Sick Children; Hon. Librarian to the Faculty of Physicians and Surgeons, Glasgow, etc. With a portrait. London: Smith, Elder & Co., 15 Waterloo Place. 1897.

In speaking of Watts' "Bibliotheca Britannica," very few know that the author was a physician. This volume gives an interesting account of Dr. Watts' life and work in small readable space, and the publishers will doubtless find a considerable sale for it amongst members of the profession.

The Medical Annual and Practitioners' Index, a work of reference for medical practitioners. Forty contributors from some of the best known medical men in England. Fifteenth year. Bristol: John Wright & Co.; London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd.; New York: E. B. Treat; Toronto: J. A. Carveth & Co. 1897.

During the past year, a vast amount of work has been done in threshing out the details of practical treatment both medical and surgical, and the contributors to "The Medical Annual" of 1897, the publication of which is always looked forward to with pleasure, have again furnished us with a volume of steadily increasing size, as well as interest. A doctor's desk is not complete without this *vade-mecum*.

The Diseases of Infancy and Childhood. By L. EMMETT HOLT, A.M., M.D., Professor of Diseases of Children in the New York Polyclinic; Attending Physician to the Babies' Hospital, and to the Nursery and Child's Hospital, New York; Consulting Physician to the New York Infant Asylum, and to the Hospital for Ruptured and Crippled. Illustrated with nineteen full-page colored photogravure plates, and one hundred and eighty-five cuts inserted with the text. Sold only by subscription. Prices: $7.00, cloth; $8.00, sheep; $8.50, half morocco. D. Appleton and Company, Publishers, 72 Fifth Avenue, New York. Geo. N. Morang, Manager for Canada, 63 Yonge Street, Toronto, and 185 St. James Street, Montreal.

There have been published in past years a large number of works upon the subject known as "Diseases of Children," but the fault to be found with the majority has been that they have dealt too much with children's diseases, and not laid sufficient strength upon diseases peculiar to earlier life. In this work on the subject, the author has paid particular attention to this point, and has very happily named his book, "Diseases of INFANCY and Childhood." Dr. Holt has avoided entering into a discussion of many questions belonging to general medicine, and which are taken up in works on that subject. What will make this book most acceptable is the fact that it is original, and represents the author's actual hospital experience. The chapters which command especial attention are: (1) The Care and Diseases of the Newly Born Child; (2) Nutrition, its Derangements and Diseases; (3) The Acute Diseases of the Lungs and Intestinal Tract; (4) The Specific Infectious Diseases. One of the most interesting discussions in the entire work is that on Diphtheria, which is up to

date in every respect, and especially so on treatment. The points in Chapter III., in Section 2, are most valuable, giving the details as to infant feeding. The work has 204 illustrations, nineteen being full-page plates. What we most like in the book is the fact that the subject of treatment is considered almost wholly from the standpoint of the practising physician. The book as a whole is eminently practical, and we consider that every physician, whether he makes a specialty of the department of pediatrics or not, should be in possession of it.

Obituary.

DR. LYNCH.

It is with regret we chronicle the sudden death of a young and promising physician of Lindsay, Dr. William Valentine Lynch. He was stricken with apoplexy on February 25th, and died in about six hours. Dr. Lynch was born at Belleville, Ont., in 1853, and showed at an early age an aptitude for, and love of, the study which characterized his whole life. His classical studies were made in St. Michael's College, Toronto, where at the close of a successful course he won the gold medal for general proficiency in literature and science. Mr. Lynch at this time of his career seemed unsettled as to his future, and proceeded to Quebec to prosecute the study of French, and decide what line of life he should follow. At the close of the year he determined to study medicine, and returned to Ontario to teach, preparatory to carrying out his intention. He entered Trinity College Medical School, where he graduated in 1885. After practising at Lindsay for a time, he settled in New York State for a couple of years, but returned to Lindsay, where he remained until prematurely cut off by death. In 1889 he married Miss Agnes McGuirk, of Barrie, who with one son, a child of three years, survives him. During his brief career Dr. Lynch had won the esteem of all classes. A member of the Lindsay Board of Health and of the High School Board, and President of the Library Board, he proved himself a man of influence and public spirit. A speaker of force and refinement, there was every promise of higher honors being open to him. His literary taste, which he continued to cultivate, found expression in his writings—upon one of which he was engaged at the time of his death, the history of the Catholic Church in Victoria County. Lindsay loses in Dr. Lynch a man of sterling character and intellectual talent, and the medical profession mourns the untimely death of an enthusiastic student and successful practitioner.

J. J. C.

Personals, Etc.

Dr. and Mrs. Doolittle sailed last month for England. They intend residing in Kenilworth.

We regret to announce the death, on March 11th, of Dr. W. W. Bremner at Pasadena, Cal. The doctor practised orthopedic surgery for a year or two on Bloor Street East in this city.

Dr. Frank P. Cowan leaves Toronto very soon to take a position as Surgeon to one of the Beaver Line steamers, sailing between Halifax and Montreal. We wish the doctor *bon voyage*.

Mr. W. A. Sherwood, of this city, has painted a portrait of Dr. J. A. Sangster, Port Perry. It is one of a series of our prominent educationists he is doing to hang on the walls of the Normal School.

Dr. R. M. Stephen, who graduated from Toronto University in 1877, and who has been in practice in Manitoulin Island for fifteen years, died very suddenly at Manitowaning of hæmorrhage of the lungs on March 9th.

Dr. J. W. Rosebrugh, one of Hamilton's best known and most highly respected physicians, and brother to Dr. Rosebrugh of this city, died on March 25th of influenza. The doctor was sixty-nine years of age, and leaves a widow and two children.

The many friends of Dr. R. R. Bucke, Medical Superintendent of the Asylum for the Insane at London, Ont., will be interested to know that he has been elected President of the Psychological Branch of the British Medical Association which meets at Montreal, August 31st to September 2nd.

Mr. S. T. Church, who for some years now has been giving special instruction in the "treatment of stammering" in Toronto, leaves Canada this month for London, England. There are very few physicians in this country who have not heard of Mr. Church's work in this distressing malady, and of the almost phenomenal success he has met with in what seemed at first to be incurable cases. Mr. Church's business methods, and the public recognition he has met with, will, we are sure, guarantee him a warm reception in the Mother Land.

ITEMS OF INTEREST.

WANTED, at once, a graduate of the Ontario College of Physicians and Surgeons, to take a "locum tenens" in a large and rapidly growing town near Toronto. Apply to Box 43, CANADIAN JOURNAL OF MEDICINE AND SURGERY, Toronto.

THE International Medical Congress will meet at Moscow from August 19th to 26th.

THE National Association of Railway Surgeons will convene in Chicago, May 4th, 5th and 6th.

IT is seldom a physician attains to three score and ten years, but we record the recent death at Leeds, Eng., of Dr. James Frobisher in his ninety-first year.

THE widow of Baron Hirsch has presented the Pasteur Institute in Paris with 2,000,000 francs, and also £80,000 for the establishment of a seashore hospital for the treatment of children afflicted with tubercular disease.

STILL another free dispensary is to be added to the list of charitable institutions in Toronto. It is to be for old and indigent women. The Woman's Medical College are responsible for this movement, and the consultants will be entirely from among the ranks of our women physicians.

THE *Medical Bulletin* has taken up extensively the subject of favorable climatic conditions for those afflicted with phthisis, and Dr. John Shoemaker has written many interesting facts about the neighborhood of the Pinellas Peninsula, Florida. All physicians interested in the subject should try and find time to read the articles.

DR. WILLIAM OSLER, of Baltimore, will deliver the address on medicine before the British Medical Association at Montreal in August. Dr. Stephen Mackenzie will be Chairman of the Section on Medicine, Mr. Chas. Heath of the Section on Surgery, and Mr. Watson Cheyne of the Section on Pathology. Lord Lister has announced his intention to be present.

A STATUE of the late Dr. Samuel D. Ross, Professor of Surgery in Jefferson Medical College for twenty-six years prior to 1882, has been cast at Paris. It will soon arrive and be placed in the grounds of the Smithsonian Institute in Washington, D.C., and will be unveiled during the Congress of American Physicians and Surgeons in May. The statue is the gift of the American Surgical Association. Congress has appropriated $1,500 for the pedestal.

Editorial Commercial Notes.

LIGHT IS LIFE.

That the heading of this short article is correct is undoubted. Just as the plant cannot exist without sunlight, so the human being cannot expect to enjoy the share of health the Creator intended he or she should have without sunshine. Compare for a moment the ghastly and anæmic appearance of the factory girl, who trudges to her work in the morning at seven o'clock, labors till sundown, in a badly lighted and poorly ventilated factory, with the robust full-blooded young man whose daily occupation necessitates his being out of doors for at least ten hours in the twenty-four. What a contrast! In one there is not only the appearance of inactivity, but her every movement betrays inability for what should otherwise be to a large extent light employment; in the other there is vim and life and hope, and in every step is the picture of good health. A poorly ventilated office or bedroom is bad enough, but a poorly lighted room, especially in a case of sickness, is worse than dismal. How different are one's spirits in a dull wet day in the autumn months to the condition which exists in a bright sunshiny morning in leafy May. Nowadays one of the principal points in the building of any hospital or sanitarium is the amount of space given to the sun-parlor and verandahs, where the patients can loll around in their invalid chairs and enjoy the life-giving properties of Old Sol, always feeling thereby greatly improved, and their energies considerably revived. Take again the condition of the people who live in those countries where rainy wet weather is the usual routine, and compare them with those who enjoy life where bright daylight seems to be the case almost eighteen hours out of the twenty-four, and it does not take a moment to pick out the one person from the other. At the present day every architect is following the trend of public opinion, and now the windows of an ordinary residence cannot be made sufficiently large, or the rooms sufficiently airy. Taking it for granted then that light is absolutely necessary to life and health, the question naturally arises, how shall it best be provided so as to at the same time economize space, as in these days of rapidly growing cities and ever increasing values in properties we cannot have our houses built with all their windows towards the south.

The rays of sunlight, as we know, fall directly downward; they do not accommodate themselves to necessity or desire. Heretofore it has been necessary to catch them, if at all, by direct exposure to the sky itself. It has, however, been demonstrated

recently in the invention of the Luxfer prism, that by the employment of the principle of refraction, scientifically applied and carefully adapted to the peculiar location in which it is to be used, light can be so successfully refracted as to lose but little of its direct power, and also can be directed to any point at almost any distance required. To characterize this new prism as one of the most remarkable improvements of the century in its bearing on practical architecture is to speak but mildly. What could be therefore better adapted for hospital and sanitarium use than the Luxfer prism, so used that the patients will enjoy the health-giving properties of light to a much larger extent than before? Take the sick room anywhere, how much more rapidly convalescence would ensue if the sufferer could enjoy a sun-bath at the same time as he is deriving benefit from the therapeutical effects of judiciously administered drugs. The ultra-fashionable habit nowadays of wearing glasses is due, as we all know, to a large extent, to that constant strain placed upon the muscles of the eyeballs through deficient light; and it has years ago been found that the cause of the high death-rate among rapidly growing young men in old London, where half and more of the offices are actually underground, and the occupants subjected all day to a poor light, as well as a constantly over-heated atmosphere from the burning of gas, is due to lack of sunlight and the consequent undermining of their otherwise strong constitutions. The Luxfer prism simply means small 4 x 4 plates of glass, one side of which is smooth and the other covered with semi-prisms, giving it a rough, corrugated appearance. The new idea is the very old one of prisms, for is anything new under the sun? In on old museum there is a small box filled with earth. It had been brought from a mountain in Arran, and when examined with a pocket lens the earth was found to be full of small objects, clear as crystal, fashioned by some mysterious geometry into forms of exquisite symmetry. The substance was silica, a natural glass, and the prevailing shape a six-sided prism, capped at either end by little pyramids modelled with consummate grace. To the man of science their beauty signified perhaps not so much as their utility.

But it certainly appeals much to the nineteenth century love of the æsthetic that the prism will also readily lend itself to the ornamental in design. As seeing is believing, a visit to the Toronto office of the Luxfer Prism Co. (Ltd.), at 58 Yonge Street, will be of interest to all physicians, where will be seen such an arrangement of these prisms that an otherwise dark cellar downstairs, and an exceptionally deep showroom upstairs, are so lighted up that the pure daylight penetrates fully one hundred feet, and that so brightly that one can read with satisfaction and ease a newspaper at that distance.

THE FEDERAL LIFE ASSURANCE COMPANY.

THE fifteenth annual report of the Federal Life Assurance Company, which we have the pleasure of publishing in this issue, is the most favorable ever laid before its shareholders. The sanguine anticipations in the report of 1895 were based upon the hope of a revival in business. There has not been any marked improvement in general business, but in that of the Federal Life the improvement was most gratifying, as is manifest from the following exhibit of the result of the year's business, as compared with 1895:

FINANCIAL MOVEMENT.

	1895.	1896.	Increase + Decrease—	
Net premiums received	$257,647	$312,398	+	$54,751
Interest, rents, etc	19,929	24,344	+	4,415
Total income	277,576	336,742	+	59,166
Payments to policyholders	115,224	131,856	+	16,632
Expenses, etc	95,800	97,968	+	2,168
Total outgo	211,024	229,824	+	18,800
Excess of income over outgo	66,552	106,918	+	40,366
Total assets	498,471	607,713	+	109,242
Policy reserves and other liabilities	415,621	517,878	+	102,257
Surplus to policyholders, guarantee capital not included	82,849	89,835	+	6,986
Surplus over all liabilities	2,652	8,538	+	5,886

MOVEMENT OF POLICIES.

	1895.	1896.		
No. of new policies issued	1,362	1,496	+	134
Sums assured thereunder	$1,830,000	$2,085,050	+	$255,050
No. of policies in force	5,775	6,014	+	139
Sums assured thereunder	$10,156,227	$10,337	+	$181,255

It will be noticed that every item of business shows an increase over 1895. An increase of $59,166 of income was secured at the very trifling outlay of $2,168 additional expenses. The excess of income over payments to policyholders and all other expenses was $106,918, an advance over the excess of 1895 by about 60 per cent. The assets received the large addition of $109,242, the total at the close of 1896 being $607,713. To this is added $618,703 for "guarantee capital," making a total of $1,226,415, as "total reserve for security of policyholders." The liabilities are $495,478 for "Reserve Fund," and $22,400 as "claims unadjusted," a total of $517,878. The average premium for each $1,000 of insurance, and the average amount at risk on each life, are now regarded as more satisfactory than at any previous period in the Company's history. In 1895 the average premium per $1,000 was $14: in 1896 the average was raised to $14.98 per $1,000. Under the vigorous and skillful management of Mr. David Dexter, Managing Director, with the able co-operation of Mr. James H. Beatty, President, the Federal is rapidly rising into a strong and prominent position.

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Original Contributions.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

TROPHIC CHANGES, ARREST OF GROWTH AND INTERSTITIAL ALTERATION OF STRUCTURE CONSECUTIVE TO VIOLENT TRAUMA.

BY T. H. MANLEY, M.D., NEW YORK.

Written specially for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

A GREAT flood of light has been shed on the changes in the tissues, consecutive to the various injuries, by the writings of Arran, Charcot, Cohnheim, Erbs, Duchenne and Raymond. Besides, observations are abundantly recorded in current surgical works of marked, and sometimes permanent, pathologic changes in muscular tissue and other structures after severe local injuries, or diseased processes in the frame-work of the trunk or the extremities.

Many theories have been invoked to explain their *modus operandi*; some alleging that these changes depend on vascular degeneration; others that they ensue through protracted immobilization of the limbs, or local neural changes.

Microscopical Morphology.—It was only, however, with the introduction of the microscope, with experimental pathology and

histo-pathological studies combined with extended clinical observations, that anything approaching an exact knowledge was obtainable: no finer molecular changes in these conditions were possible.

It is self-evident, then, that the surgeon or practitioner *au courant* with the advances of our time must familiarize himself with the finer myopathic, neural and other trophic degenerations depending primarily on trauma.

Fracture, Dislocations, Joint Contusions and Wrenches, *Entorse*.—In no class of traumatisms will this serve a more useful purpose than in that very common class of osseo-arthritic injuries which involve the articulations and shafts of long bones, the prehensile and locomotor organs.

Clinical Features.

We may occasionally observe after a simple fracture of a limb, when union is very tardy, or when complete, the limb remains, over a long period, defective in strength and motion. The soft parts above and below the point of fracture have lost their firmness, have wasted, are cool and paretic. Again, as an almost invariable concomitant of severe arthritis, traumatic or pathological, when inflammation extends into the over-lying parts, simultaneous with limitation of joint action there is a marked diminution in the rotundity of the limb. It is interesting and highly important to note that in all severe forms of inflammatory lesions of the shafts or joints, as fractures, sprains, dislocations, hip or knee-joint diseases, which necessarily entail fixation or prolonged inaction, in the child, there is an arrest of growth in the affected limb.

Although osseous hyperplasia and epiphyseal regeneration are, in these cases, rapid on the subsidence of inflammation, such activity is not equal to the loss; and shortening on recovery is too obvious to be overlooked by even the casual observer.

Bearing on Prognosis.

A knowledge of the above fact should always be borne in mind, either after a severe injury of the lower limb of a child, on the onset of interstitial, tuberculous inflammation; nor should it be forgotten that no description of dragging or tension of the limb by any description of orthopœdic appliance will in any manner act as an aid to compensation in length.

We will sometimes, too, be consulted in cases in which there has

been noted by the parents a lopping over of one hip or a lateral spinal curvature, wherein no lesion of any kind can be detected, though there is a sensible and marked difference in the length of the two lower limbs.

Upper Extremities.—Muscular atrophy or arthritic changes, leading to arrest of growth, after injury of the upper extremities are not noted so often as in the lower; and when they do occur, as they are not so obvious as in the lower, are apt to be overlooked, as shortening or moderate asymmetry here is functionally, at least, unimportant. With those not engaged in severe manual labor, though various muscular groups may have undergone limited atrophic changes, little impairment in action follows unless the limb is put on a severe strain. In fact, the defect may occasion no serious inconvenience throughout life and wholly escape detection except on a critical examination.

Histological Arrangement in the Normal Neuro-muscular Tissues.—Before we undertake to interpret the significance of post-traumatic mutations in the molecular elements involved, we should have some acquaintance with the morphology and arrangement in the healthy structures.

With a muscle we have a sheath, this divided by septa into fascicules, and these further subdivided in Heiser's tubules invested by sarcolema, all of which, except the muscular fibrillæ, are designated interstitial substances. Within Krause's membrane only do we come on the true muscle elements, the parenchyma.

The neuro-muscular system comprises, according to Raymond, three distinct divisions: (1) The multipolar cellule in the anterior horn of the spinal cord, the medullary ganglion; (2) The nerve-trunk; and (3) The muscle fibre in which the nerve-fibre is lost. Although these three segments possess very different anatomical arrangements, from a functional point of view, they may be classed together under the generic term of the neuro-muscular system. We are further, in many cases of an obscure origin, forced to look beyond the peripheral nerves; when we may find our deductions much simplified if we divide the nervous system into the central, the conductive and terminal.

Medicine.

THE DIAGNOSIS OF CHRONIC NEPHRITIS.

BY ARTHUR R. EDWARDS, A.M., M.D.

Professor of Therapeutics, Northwestern University Medical College; Professor of Medicine and Clinical Medicine, Woman's Medical College; Attending Physician Cook County and St. Luke's Hospital.

Chronic nephritis is usually diagnosed with ease when the urine of every patient is systematically or repeatedly examined. The urinary examination must be made from a twenty-four hour specimen, considering the specific gravity, the gross amount of solid excretion, albumin and microscopic morphology, casts, pus, etc. It is justly believed that care in the directions indicated insures correct diagnoses, a supposition in the main accurate and yet subject to various clinical errors. We are, therefore, expected to consider under the subject of diagnosis rather exceptional clinical features.

The amount of urine may decrease in the terminal stage of an interstitial nephritis, or be constantly small when cardiac hypertrophy does not develop, for example in the more parenchymatous types or when in interstitial forms the general nutrition is so low as to preclude the usual myocardial hyperplasia and hypertrophy.

Specific gravity and the total solids may be persistently low, indicating functional inadequacy rather than organic renal disease.

Albumin is found in most cases in which repeated examination is made of the daily quantity passed. It goes without saying that analysis of single specimens is particularly deplorable from the obvious and often vainly emphasized errors incident to such superficial examination. Clinical experience teaches that we often rely with a sense of false security upon signs and symptoms generally regarded as classical or infallible, and hence are subsequently astonished at the pathological lesions revealed at autopsy. This general statement applies specifically to albuminuria in nephritis. I am certain we overlook nephritis of both types in regarding albuminuria as a certain or constant symptom. Nephritis without albuminuria certainly exists, although reference to the subject is very meagre in established and current literature.

A number of cases of nephritis could be cited from personal

experience in which albumin was lacking, and the diagnosis was made from microscopic or from visceral findings. For example, a man exhibited uræmic symptoms and albuminuric retinitis, though the urine was found free from albumin and casts for nearly a year. Nephritis was diagnosed from the retinal and cardio-vascular lesions, and confirmed a year later postmortem. Again, in a patient at the acme of typhoid fever, an anasarca developed for which no causal cardiac asthenia nor marasmus could be assigned. No albumin was demonstrated by various and repeated tests, yet the sediment was literally loaded for three weeks with fatty, epithelial, granular and hyaline casts, indubitable nephritis sine albuminuria. Similiar instances could be multiplied. Spurious albuminuria from pus or blood scarcely enters into consideration of our topic, since the danger of error is presumably recognized.

Casts may be found at intervals when albumin is temporarily absent, when albumin is permanently absent or late in resolving inflammatory processes after chemical tests prove the final absence of albumin. Casts should be searched for even when albumin is absent, although many are too prone to examine the sediment of non-albuminous urine with pre-determined negative results.

Our conceptions have been broadened concerning the significance of hyaline casts, now regarded as occurring in apparently normal urine. The evidence is not yet all in regarding granular and epithelial casts, but they probably always point to some degenerative inflammatory lesion.

As a cardinal diagnostic point with retinitis albuminuria and the urinary findings, we consider the cardio-vascular alterations, which, frequent in the interstitial, are at least inconstant in the parenchymatous types. Heart and arterial changes are by no means invariable, even in contracted kidney. Cardiac hypertrophy may be simple as in primary contracted kidney, or excentric as in other forms of contracted kidney. There may be dilatation without hypertrophy or indeed even atrophy, as observed in a recent case. The circulatory changes may be otherwise explained, *e.g.*, from arterio-sclerosis of different etiology.

As a broad statement, he who invariably examines the urine and heart in every instance rarely fails to diagnose nephritis. This very interdependence of heart and kidney, usually of diagnostic aid, may prove the source of clinical confusion. Thus primary cardiac disease may cause renal congestion, embolism, or even acute or chronic nephritis. Again, alcohol or syphilis may be

a common cause for arterio-sclerosis, myocarditis and nephritis, diseases as subordinate to the causal factor as independent of each other. Finally, the heart lesion, as above enumerated, may be wholly secondary to renal disease.

Simple renal stasis is usually differentiated with ease by considering the sediment, inflammatory insignia being absent, and by noting the parallelism between the urinary findings and the cardiac activity, whence the diagnostic value of such cardiants as digitalis and strychnia. In terminal stadia with cardiac weakness, extensive hydrops, dyspnœa, rales or a systolic murmur, it may be difficult or impossible to differentiate between myocarditis with renal stasis and renal disease with ultimate cardiac asystole. Gallop-rhythm is more common in the heart of renal disease than in primary cardiac affections.

The Diagnosis of the Pathological Lesion, the Stage or Variety of Chronic Nephritis.

The subject concerns, for illustration, the diagnosis of parenchymatous and interstitial nephritis, primary or secondary contraction, chronic hæmorrhagic nephritis, or an acute exacerbation of chronic nephritis, genuine contraction or arterio-sclerotic atrophy.

Differentiation is often possible by careful, repeated scrutiny of symptomatology, etiology and clinical course, but it is often impracticable, as shown by the constant war rife between pathologists and clinicians regarding types and sub-types of nephritis. Some pathologists diagnose only chronic nephritis. If either side is to be the more trusted in the final judgment, it is rather the clinical view, although the truth lies in the middle ground.

The Etiological Diagnosis.

The causal element concerns the prognosis and treatment equally with the diagnosis. The status of a chronic nephritis, its interpretation and rational efforts at therapeusis must differ with the varying etiology, *e.g.*, nephritis is scarcely the same disease when caused by malaria, pregnancy, tuberculosis, endocarditis or plumbism.

Differentiation Between Nephritis and Concomitant Urinary Disease.

Diagnosis may be difficult when nephritis coexists with diabetes mellitus, or impossible when in conjunction with diabetes insipidus.

Another diagnostic difficulty is the coincidence of spurious and genuine albuminuria, *e.g.*, pyelitic pyuria plus nephritis, where, however, differentiation is possible by consideration of the relative amount of albumin and pus cells, according to Goldberg's formula, albuminuria vera exists with albuminuria spuria when more than one part of albumin per mille by Esbach's test is found with 50,000 pus cells in one cubic millimetre of wine.

In pyuria the leucocytes are polynuclear, a form found but seldom, or in small numbers only in uncomplicated nephritis. Cystitis and nephritis need seldom cause confusion. The diagnosis between beginning contraction of the kidney and vesical catarrh may long remain in suspense, but consideration of the specific gravity, such somatic complications as retinitis or cardiac hypertrophy, and washing out the bladder before urinalysis (Thompson) generally clear the diagnosis.

Is a Proven Nephritis the Sole Lesion.

Many errors are made in the interpretation of this question, although the observative element, the physical findings in the case, may be absolutely correct. Finding a patient with nephritis, we ask, Where does said nephritis stand? What is its exact dignity? Is the cause hidden? Is it primary? Is it somewhat of an accidental finding? At this point the most delicate refinement is demanded if we would diagnose correctly. Thus, is nephritis with a heart murmur, caused by a more or less latent endocarditis, a deep-seated tuberculosis, an insiduous syphilis, or an atypical malaria?

Another difficulty frequently insuperable without several observations of the case, is to decide whether a chronic nephritis may be the cause of a pericarditis, pleuritis or pneumonia found upon first examination, since nephritis, lessening the physiological resistance, is frequently complicated by these highly characteristic secondary, or it may be terminal, infections. Conversely a tubercular pleurisy, a pulmonary tuberculosis or a genuine lobar pneumonia is capable of exciting secondary nephritis. In the two groups of possibilities cited, it is not always easy to separate an acute from a chronic nephritis, and hence the diagnosis with the parallel prognosis, depends solely upon the chronological test, the clinical evolution of the disease. Many can recall from hospital practice cases of skull fracture, miliary tuberculosis, leptomeningitis, cerebral abscess, sepsis and a host of other diseases, which

were falsely diagnosed uræmia, simply because nephritis was also present. Senator has said, doubtless from personal diagnostic errors, that without previous history we can often only diagnose a renal disease and suspect other latent affections.

The Danger of Mistaking Uræmic Symptoms for Independent Disease.

The subject of uræmia is here impossible. The danger lies in the possible interpretation of isolated uræmic symptoms for diseases in themselves. Thus, the persistent, protracted, irregular hemicrania of renal inadequacy may simulate uncomplicated migraine. Eye changes, neuralgia, epistaxis, bronchitis, asthma, pneumonia, cardiac symptoms, coma, convulsions, dyspepsia or dysentery may so color the clinical picture that the fundamental pathological condition is forgotten.

As we suspect syphilis in obscure cases of cerebral and other diseases, so repeated logical fallacies, imperfect history, mistakes in physical diagnosis, or what is by far the most humiliating and common error, the neglect of known facts and experience, compel us to think of nephritis or its dreaded issue, uræmia, in every case which is obscure or which may tempt us to rest satisfied with the diagnosis of another seemingly dominant disease.—*Chicago Medical Record.* W. J. W.

A Prophetic Utterance—

The London *Daily News* relates the following story in a notice concerning the honor recently conferred on Sir Joseph Lister: While going round his wards in the Glasgow Royal Infirmary one day, Sir Joseph, then plain Mr. Lister, came to the bedside of a patient whose arm had been severely crushed without the skin having received any injury. Turning to the assembled students, he said, "Gentlemen, I have frequently noticed that when severe injuries are received without the skin being broken, the cases nearly always recover. On the other hand, trouble is always apt to follow, even in trivial injuries, when a wound in the skin is present. How is this? I cannot help thinking that the man who is able to explain this problem will be one who will gain for himself undying fame." The problem was solved by the speaker himself, and the fame has been gained.

Surgery.

CONGENITAL SARCOMA OF THE SKIN.

In the "Epitome" of a recent number of the *British Medical Journal* there appears a synopsis of a case reported by E. Neuhaus, in the *Arch. f. Kinderheil*, of congenital sarcoma of the skin.

Five days after birth the mother noticed the left leg to be thicker than the right. When the babe was five weeks old, a swelling, the size of a hen's egg, was removed from this leg. Two weeks later another tumor appeared over the right clavicle. At two months, numerous tumors, varying in size up to a walnut, were found on the trunk and lower limbs. They were confined to the skin and subcutaneous tissue; two ulcerated. The outer side of the leg was much thickened and infiltrated, and the fibula could be felt through the mass of the tumor. The inguinal and cervical lymphatic glands were enlarged. There was a small nodule on the inner side of the cheek. Examination of the excised nodules showed them to be round celled sarcoma.

At the autopsy a large mass of growth was found on the left leg. There were metastasic deposits in all parts of the body. The primary growth in the leg was connected with the skin and not with the bones; both tibia and fibula were unaltered. The writer has only been able to discover a record of six cases, including his own, of congenital primary sarcoma of the skin.

F. N. G. S.

MEDICAL AND SURGICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

At a recent meeting of the above society Dr. Hazen read a paper on "A Case of Congenital Dislocation of Both Knees." The case was that of a female child in whom the heads of the tibiæ were dislocated forward, the legs making an acute angle with the thighs, allowing the toes to touch the abdomen. No patella could be found on either side. The parents would not consent to any line of treatment until during the third month when a rudimentary patella was

discovered in the right knee. After reducing the deformities a plaster of Paris bandage was applied. At the time of changing the bandage improvement was noted and passive motion practised. The child is now fourteen months old, large and active, and, with the exception of a slight lateral play of the joint, the knees are normal. It is Dr. Hazen's intention to apply an apparatus with a stop joint at the knee. In the published reports of thirty-five cases, twenty-five were forward dislocations; seventeen were double; in thirteen the patella was absent at birth, and in only two was there a double dislocation in an otherwise perfectly formed infant.

Dr. Stone read a paper on "The Causes and Treatment of Cystitis." Dr. Stone gave as causes, infectious diseases from the urethra or ureters; influence of neighboring organs; organic diseases of the bladder, and chemical irritation. In speaking of the treatment he urged careful examination of cases, and as many of the cases are due to organs outside of the bladder, as the kidneys, prostate and uterus, attention to these would indicate a rational line of treatment. The treatment of diseases of the bladder has been revolutionized since the advent of the cystoscope. Dr. Stone lays stress upon dilatation of the urethra in women and careful distention of the bladder. He rarely sees acute cystitis not due to direct infection, either gonorrhœal or instrumental. The bladder appears to be peculiarly free from disease of its mucous lining from other causes. In chronic cases he advises distention and irrigation. The chief reason for cystotomy in these cases, unattended by foreign body, is to provide drainage. In acute cases he would insist upon rest and attention to diet; give diluents, possibly alkalies. If there is retention advise irrigation. Sedatives may be required to quiet pain and spasm. In chronic cases treat on general surgical principles. The bladder must be rendered aseptic, drained and carefully distended. Cystoscopy is a very difficult operation in the male.—*Maryland Medical Journal.*

F. N. G. S.

Modern Medicine.

"What are you studying so intently?" said Mullins to his friend, Dr. Paresis. "I am trying to ascertain whether a patient of mine can stand a consultation." "That book you are reading treats of his ailment, I suppose." "No, this is Bradstreet's."—*Town Topics.*

Medical Jurisprudence.

THE RELATION OF THE PHYSICIAN TO THE LAW.*

BY HENRY LEFFMANN, A.M., M.D., PHILADELPHIA.

MEMBERS of the Students' Medical Association: When asked to lecture before you, I selected this topic because I know it is important, and I hope it will prove interesting. "Every man," says Sir Edward Coke, "should know a little of law," and the comic Blackstone, an amusing sketch that appeared years ago in *Punch*, adds "the less the better." I am inclined to agree with the humorist, in so far that I think it unwise for any but lawyers to attempt to understand the methods of legal practice. When I see any one consulting an "Every One His Own Lawyer," I anticipate disaster. On the other hand, the principles of government and the methods by which laws are made and enforced are the concern of all, and especially of the members of a profession that touches the law through that middle ground known as medical jurisprudence, or forensic medicine.

You are liable to stand in various relations, voluntary and involuntary, to the law and its methods. You may be plaintiff or defendant, prosecutor or prosecuted, ordinary or expert witness, and already in some States, and possibly, before long, in all, you may be jurors. It will be useless for you to resolve that you will keep out of courts. The profession which you have chosen will bring you more or less in contact with legal procedures, often of the gravest character. I do not propose to consider those cases in which you appear as the party to a suit, but only those in which you stand in your professional relations as an agent or actor in some event having legal relations.

At the outset, it may be well to note that the law takes no account of schools or sects in medicine. The schisms in medical organizations are deplorable and real to us, but to the rest of the world they appear as mere prejudices, or they seem born of professional rivalry. In many cases courts have even placed regular

* A lecture delivered before the Students' Medical Association of the Woman's Medical College of Pennsylvania, December 5th, 1896.

graduates and uneducated, unregistered practitioners upon the same basis. It will not be worth while, therefore, to express opinions about regular medicine, homœopathy, eclecticism, etc., in court. You will convince no one, and will produce nothing but a smile.

You may appear in court as either an ordinary or an expert witness. In the former you are called merely to testify to some incident or information of which you have knowledge in the same way and to the same extent as a layman. You may see a person run over, or you may have heard some conversation bearing upon some business matter. In such cases you will be sworn or affirmed without inquiry as to your professional education or experience, and you will be allowed to tell only that which you know of your own knowledge. As an expert witness you may go largely outside of these bounds. You may be asked your opinion on certain subjects, and even be allowed to quote from books and journals, though on the latter point courts are becoming more conservative. Before testifying as an expert you will be subjected to some questioning to test your fitness for the duty. This will generally be a brief review of your professional life. Your admission as an expert is within the discretion of the court.

It has been a moot question how far a doctor is liable to duty as an expert without previous agreement to serve, and whether such service entitles to compensation above that of the ordinary witness fee. (The ordinary witness fee, I may observe, is about one dollar per day, and mileage.) The courts are not quite in agreement on this point, and I am sorry to say that the trend seems to be towards regarding expert services as but little entitled to additional compensation. As a matter of abstract law, there can be no doubt that the courts are entitled to the service of any one, for the welfare of the community is above the comfort or convenience of any individual. The power that set "Uriah in the fore-front of the hottest battle" still exists in our modern state, and can command any sacrifice it needs, but in actual practice, witnesses are selected by the attorneys, and the pitfalls of expert testimony are so numerous that it is very rare that experts are called without careful consultation beforehand and the agreement for sufficient compensation.

Whether you appear as an ordinary or expert witness, you are served with a subpœna, that is, an order signed by some legal authority. This is read to you by some person delegated by the

court, and usually commands that "laying aside all business or excuses whatsoever you be and appear in your proper person," etc. A penalty for disobedience is appended, and, as an illustration of the conservatism of the law, I may say that the subpœnas of this country still state the penalty at one hundred pounds. County courts are limited by the bounds of the State in which they are located. The subpœnas of New Jersey courts have no value in Pennsylvania, or *vice versa*, but the subpœnas of the United States courts, which are issued in the name of the President of the United States, are valid throughout the nation.

Your duty as an expert may arise either from services rendered in a professional capacity to the victim of some accident, crime, or disease, or it may be merely as an adviser upon some phase of a case. I prefer to consider the first condition in more detail.

You may, for example, be called to a patient suffering from symptoms which turn out to be due to criminal poisoning, and terminate fatally. Either through your own or another's statements, the case goes before the authorities and the legal machinery is put in motion. In most cases, the first person to investigate is the coroner, who inquires as to the cause of death. Massachusetts has medical examiners who take the place of this official. In this inquiry you must be just as guarded as to your statements as if you were in the most dignified court. Your testimony will probably be taken down, the coroner's inquest is in public, and statements made without proper thought or care may return to plague you.

The law does not expect impossibilities. You must not be afraid to acknowledge the limitations of your information. Coroners often want experts to be positive, to give definite opinions so that a definite verdict may be rendered, but this cannot always be done. When a suspicion of poisoning has arisen, the inquest usually awaits the results of an analysis, and I may, in passing, say that I think it is a mistake for one in general practice to undertake to make such analysis. Supposing that a verdict implicating some person has been rendered, the accused is held either in bail or without, in accordance with the degree of suspected crime, and the next move in the case is indictment. This is the specific charge, and is inquired into by the grand jury, which is a secret tribunal before which only one witness is examined at a time, and which makes known nothing but its decision. If it finds sufficient facts to justify an official inquiry it returns a true bill,

if not it ignores it and the matter ends. A true bill is returned to court and a trial follows. I may say here that the coroner and grand jury have the same power to compel attendance that the courts possess.

The work of the coroner and grand jury is usually one-sided. that is, the accused person has little chance of fighting the evidence. The grand jury, indeed, does not hear the defence at all, and the coroner uses his discretion as to allowing opportunity to question witnesses.

It is at the formal trial that the lines are strictly drawn and the doctor is put upon the test of merit and ability. I pass over without special allusion the many annoyances and inconveniences of courts. The Law's delay is proverbial, and their seems to be no remedy for it. Your first experiences in court will both interest and exasperate you. You will certainly be interested in observing the workings of a system which is the growth of centuries. The lawyers tell us that the law is the accumulated wisdom of a thousand years. In the criminal jurisprudence of this country, the most humane in the world, there are many features which represent centuries of struggle or of very slow evolution. Many features which seem odd to you are really the exponents of principles for which blood has been shed on many a battlefield, and for which many a martyr has blackened at the stake. Our system is substantially that of England, but the jurisprudence of continental Europe, often much extolled by Americans who do not understand it, represents harsher principles.

You may be exasperated by attention to what may seem to you unimportant details or diversion of the inquiries into unnecessary channels, but you must always bear in mind that there are technical methods in the law which are not comprehended by those not of it.

Before you give your testimony you are sworn or affirmed. Though your choice of being affirmed is not often objected to, yet it is not a matter of mere preference, and a witness can be deprived of the right to affirm, if he or she has no conscientious scruples against taking an oath. Since you always appear, at least nominally, as a witness for one side, you are first questioned by that side, in what is called the direct examination, which is somewhat restricted in range. In important cases the legal sparring, which is so entertaining to the spectators and so carefully reported by the newspapers, begins almost at once, and the opposing counsel

may rise and check your answering, with the remark, "I object," or, "Don't answer that question." Both attorneys will then turn to the judge and occasionally the matter will be argued at length. Your part is only to remain passive. Let me ask you not to be hasty to answer. Give the opposing attorney every opportunity to interpose objections, because the admission or rejection of questions is purely a matter of law with which you have no concern. Try to be plain in your language. This is not always easy. One gets accustomed to the technical language of science, and it becomes plainer and easier than every-day words. Lawyers themselves, though often complaining about the pedantry of doctors, do not hesitate to use highly technical words and phrases, to talk about, for instance, *res gestæ* and *corpus delicti*. It is well, however, to make an effort to say "bleeding" instead of "hæmorrhage," "spitting" instead of "expectoration," "vomiting" instead of "emesis," "inflammation of stomach" instead of "gastritis," "corrosive sublimate" instead of "mercuric chloride."

It is a delicate matter to caution you not to exceed the bounds of fact in your direct evidence. I assume, of course, without hesitation that you will desire only to state that which you think true, but lawyers are experts in making the worse appear the better part, and they often lead a witness into broad and untenable statements, the insufficiency of which may be shown later to the confusion of the expert. That there are in this country experts who are reckless in their statements, and who pervert facts and principles for the sake of large fees, is only too true; and these men have unfortunately been regarded as representative of the whole profession. Hence the frequent dislike which courts show towards experts, and the latitude which they permit to attorneys in questioning.

I would advise that you make no effort to set bounds to the personal acts of attorneys, nor to resent insinuations as to honesty or ability. It is far better to answer each question coolly and clearly, and leave to the attorneys representing the side for which you are called to put a stop to the procedure. They are much better equipped than you to fight on this line, and a capable lawyer will do it at the proper time. Do not appeal to the judge as to whether you shall or shall not answer a question.

I have remarked that the law does not expect you to perform impossibilities, and, therefore, you are not expected to remember in minute detail the observations of a post-mortem or analysis, or other professional work. You are allowed to consult

notes, but they must be original memoranda made at the time of the observation or soon thereafter. I do not know that the law has fixed the limit of time; each case will be judged by itself, but the practice of not admitting copies of memoranda is well settled.

It will be opportune here to discuss some of the practical details concerning post-mortem, or any scientific inquiry that you may make for the legal authorities. I do not intend, of course, to say anything about the technique of those operations but the business and professional matters in point. You will be interested in knowing how you are to secure your pay for services. All officers are not privileged to authorize expenditures, and you may be left without compensation for much labor if you are not careful. In many counties, the county commissioners alone are authorized to incur expenses outside of specific appropriations, but in other cases the district attorney, or prosecutor of pleas, as he is often called, has similar power. The coroner often has an item in his appropriation bill which provides a sum for expert work. It will be well to inquire for yourself and get a contract in writing in the form of a letter or order directing you to do the work and specifying your compensation. As a rule, I have had but little loss in official fees, but I was once cheated in one county in this State, even my mileage and witness fees having been collected by a court officer and pocketed.

Avoid making autopsies at night. It is not possible to do justice to the work under such conditions. Take full notes in technical language of all points brought out in the course of the work and keep these as the original memoranda for use in court. Enter in these notes only facts, leaving inferences from the facts to be discussed later. Thus, if you enter, "mucous lining of stomach highly inflamed with extravasations of venous blood," do not add, "probably irritant poisoning." You will be asked in due time to describe the condition of the stomach, which, after referring to your notes, you will give in simple language so that court and jury will comprehend it, and then you may be asked, "What does this condition indicate?"

If specimens are to be taken for analysis or exhibition in court they must be so kept that there may be no dispute as to their identity. There must be no "solution of continuity" in the transfer of specimen. It must not be left at the laboratory of the chemist or pathologist in his absence. Important specimens should be sealed. I find that many persons think that sealing means

merely to daub melted wax over various parts of the package, and let it harden in irregular lumps; but proper sealing involves the imprinting of some distinct design on the wax, so that if the seal be broken it cannot be restored. It is best always to take dated receipts for packages delivered. These receipts are original memoranda, and often of value in fixing the history of a package.

I hope, if you have anything to do with the taking of specimens for analysis in a case of poisoning, that you will make every effort to keep the various organs separated. Do not put pieces of the liver and kidney in the same jar with the stomach and its contents. This destroys one of the most important links of evidence, namely, the proof that the poison had been absorbed into the system before death. How can poison be assumed to have entered the liver before death, if the piece sent for analysis has been lying for hours in the same jar with the stomach contents? Yet I have known an eminent pathologist, now deceased, to put specimens together in this way. Do not put specimens into old tomato-cans, beer bottles or old anatomical jars (I am speaking now of actual cases within my experience), but use, if possible, new jars.

The use of preservatives is a matter that often requires attention. It is best to avoid these, for they complicate the case. If it be necessary to use them, the material selected, *e.g.*, alcohol, should be from one lot, which should be mixed, and a sample, placed in a clean bottle, transmitted with the specimens, that the analyst may examine the preservative itself and be satisfied that it is free from the substance which has been found in the preserved specimens.

In selecting and preparing specimens, it must not be forgotten that microscopic examination is often needed, and the organs must not be rendered unsuitable for this purpose. The frequent use of embalming fluid makes it advisable that you should ascertain if any has been employed, and obtain, if possible, a sample.

When the direct examination has been finished, you are turned over to the tender mercies of the opposing counsel, and then begins what is called the cross-examination. This often justifies its title. It takes a wide range, and is often very skilful. Do not attempt to resent or restrain the attorney. The more a truth is talked about the more it becomes apparent. Shrewd attorneys are careful in examining expert witnesses. You will often be asked puzzling questions, to which a simple answer "Yes" or "No" is demanded. In such cases, answer as seems nearest right, and then request permission to explain your understanding of the question.

Your duties to the legal authorities are, however, not merely as witnesses. It is your duty to report to the proper officer any case in which you have good reason to believe that a crime has been committed.

An interesting question is in regard to privileged communications—that is, communications which are confidential to the extent that you cannot be asked to repeat them in court. Unfortunately, the law in regard to these is not uniform or entirely settled. In some States, communications between the patient and physician, as far as relates to the disease, are privileged, and the physician is not even allowed to divulge them in court. In other States, there is no definite legislation. In all cases, these questions are matters for the court to determine.

Another important feature of your public functions is your relation to the sanitary authorities. In this you may be, with little labor or annoyance, of great aid. The early reporting of contagious diseases greatly assists in the restriction of them. Here, again, you are not expected to perform impossibilities. Boards of Health know that immediate diagnosis is by no means always possible, and it is just as desirable that a non-contagious disease should not be reported as that a contagious one should be. You are allowed a reasonable time, and I advise you to cultivate amicable relations with the sanitary authorities and their agents, and you will often be able to get their assistance in your diagnosis and to carry on this part of your duties without friction. You must not forget that the collection of correct statistics of disease and mortality is a most important aid in hygienic progress.

In reporting causes of death, try to give the actual disease, not merely some incident of it. Avoid such vague terms as dropsy, heart failure, intestinal haemorrhage, convulsions, etc.

The law does not require a physician to guarantee a cure, nor even to render the highest skill known to the profession. Strictly speaking, you are at liberty to refuse to attend any patient. Practically, it will be well to exercise great caution in this regard.

These, then, are some of the principles that I suggest for your guidance in your relation to the public, and especially to the law. You will be scattered over a wide area and will practise under different social systems and different methods of jurisprudence; but I think that what I have said will have some application in all cases, and I hope that the advice I have given will, if followed, inure to your own comfort and exalt the dignity of our profession.

W. A. Y.

Mental Diseases.

GYNÆCOLOGY AMONG THE INSANE.

Uterine disease or displacement is often a very important factor in the causation of mental derangement among women. Indeed it is clearly recognized by gynæcologists that many of the vague complaints which fall short of insanity, yet partake very strongly of the nature of fixed delusions, often seem to be corrected by some operation in the reproductive tract, between which and the complaint in question there appears to be no possible connection.

Lombroso, moreover, remarks in his "Female Offender" that "Female lunatics in general surpass their male prototypes in all sexual aberrations and tendencies, and, after long years of observation, I am disposed to agree with Hergt, who affirmed that two-thirds of female lunatics suffer from maladies of the reproductive organs, which by increasing reflex action and impairing physical activity bring on convulsions and produce abnormal sensations which are transformed into illusions, hallucinations, delirium and obscene impulses."

In a similar manner Maudsley also refers more than once in his works to the sympathetic action upon the brain, caused by affections of the uterus and its appendages, and mentions cases of marked melancholia which were promptly cured by timely attention to a displacement.

In view of these well recognized facts, steps are being taken in a few asylums for the insane to systematically examine the female patients in whom such disorders may be suspected, and where such exist to resort to conventional forms of treatment. At the London Asylum for the Insane some excellent work has been done in this direction during the past two years, and in the Inspector's report upon the Lunatic and Idiotic Asylums of the Province of Ontario for 1896, one will find a very interesting paper upon the work done there by Dr. A. T. Hobbs, the Assistant Physician. In this paper, as well as in a brilliant article just published in the *American Journal of Obstetrics*, Dr. Hobbs describes his work in detail.

In his examination of a large number of female patients the cases of endometritis were found to be most numerous: then followed in order, subinvolution, lacerated cervix, lacerated perineum and retroflexion. Of twenty-seven cases operated on, two have recovered and thirteen are improving, and five have died.

But of the latter, only four could be in any way connected with the operation, the remainder having died of disease foreign to that which necessitated the operation.

It would perhaps be premature at this early stage to make any criticism upon the excellent work which Dr. Hobbs has begun. Dr. Robert Barnes, referring to a patient who had been cured of mental trouble by a pelvic operation, remarked: "If the present case had got into an asylum she would have remained there, for it is a great fault of the organization of our asylums that there is no provision for the examination of such cases." E. H. S.

Classification of Epilepsy.

Dr. Frederick Peterson, President of the Board of Managers of the Craig Colony of Epileptics, has the following to say in his third annual report regarding the classification of this disease:

"So little is known of the etiology and pathology of epilepsy that it is not possible, in the light of present knowledge, to make a satisfactory classification of its forms. The terms grand mal, petit mal, psychic and Jacksonian are largely symptomatic designations, and bear little relation to causative factors. A classification based strictly on etiology is not possible, but none will deny that such a classification would be more scientific and valuable. The classification here offered is not held to be perfect or even satisfactory, but is used as a working basis for future improvement: 1. Genito-Neuropathic; 2. Post-Paralytic; 3. Traumatic; 4. Hystero-Epilepsy; 5. Hereditary; 6. Imbecilic; 7. Acquired; 8. Senile." E. H. S.

A Quarterly Bulletin.

Dr. C. K. Clarke, Superintendent of Kingston Asylum, in referring to a quarterly published by the officers of the asylums in the State of New York, makes a very timely suggestion in his annual report, that a similar periodical be established by the medical officers of the Provincial asylums. The benefit of such a publication would be very great, not only to those engaged in the treatment of the insane, but also to the profession at large, and would serve to keep them in touch with the scientific work done in some of the asylums. The printing could be done, as in the State of New York, at one of the institutions at a very slight cost. It is to be hoped that some decided step will be taken upon Dr. Clarke's very apt suggestion. E. H. S.

Public Health and Hygiene.

REPORT ON DISINFECTION BY THE DRY VAPORS OF FORMOL.

BY J. J. CASSIDY, M D.,
Member of the Provincial Board of Health.

To the Chairman and Members of the Provincial Board of Health :

GENTLEMEN,—Being interested, as a member of this Board, in the application of the vapors of formaldehyde to practical disinfection, and not finding, in my reading, any satisfactory solution of the question, I wrote to Dr. Bosc, of Montpellier (February 20th, 1897), asking him for the required information. Dr. Bosc, I may say, is a member of the medical faculty of Montpellier, France, and a well-known writer on scientific medicine. I did not receive an immediate reply: but the reason for the delay will appear in Dr. Bosc's letter, which is as follows :

"20 RUE ARGENTERIE,
"MONTPELLIER, April 10, 1897.

"SIR,—At the time your letter reached me I was engaged in inventing a method which makes disinfection by formol very practical, and have therefore delayed sending you a reply.

"Formol in the gaseous state is an absolutely sure disinfectant, but it is necessary that the 40 per cent. solution of formic aldehyde be changed into perfectly dry vapors, which are thrown into the rooms to be disinfected. At the present time the formogenic lamp, which produces only a small quantity of the vapors, is no longer used.

"The formogenic autoclave of Trillat was a great improvement. It gives out vapors freely, but they are not perfectly dry, and the apparatus has several disadvantages, to which I have referred in my last publication.

"The apparatus which I have just had constructed, and which I have used at a rigorous experimentation, produces an abundance of dry vapors without the aid of heat, and instantaneously. My builder has already made apparatus, after different models, which

are used in the disinfection either of large buildings—such as hospitals, barracks, etc.—or apartments. This apparatus makes disinfection very cheap.

"You will find information on the subject in an essay which I send you by the same mail. If you desire more precise information, I shall deem it a pleasure to furnish it.

"Receive, sir, the assurance of my most perfect consideration.

"F. J. Bosc."

J. J. Cassidy, M.D.

I shall now give you a translation of a part of a report made by Dr. Bosc, showing the practical and effective character of disinfection by the means of formic aldehyde:

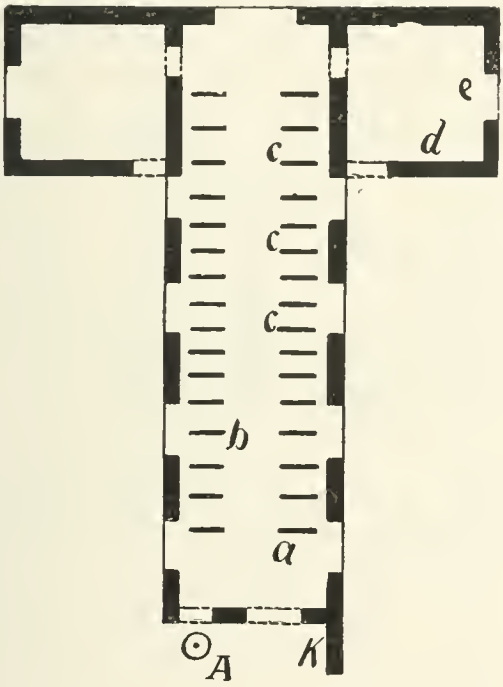
"Experiments in Disinfection with Vapors of Formaldehyde by the Means of Mr. Trillat's Apparatus. By Dr. F. J. Bosc, Member of the Medical Faculty of Montpellier. Report addressed to the Hospital Commission of Montpellier.

"Experiments in practical disinfection with vapors of formaldehyde were made in one of the pavilions for contagious diseases of the Saint Eloi Suburban Hospital, Montpellier. The locality to be disinfected consisted of a large ward of ogive shape, communicating with which were two small annexes. The large ward measured 17 metres in width at the base and 15 metres in length; each of the annexes measured 5 metres in length by 3.45 metres in width and 3.90 metres in height. The total measurement was 737.550 cubic metres. The apparatus for generating formol vapors was placed in position by Mr. Trillat and myself in a little outside room at *A* (see diagram), near the rooms which were to be disinfected. It was started at 9 a.m. and the pressure rapidly increased to four atmospheres. The dry vapors were allowed to escape into the large ward through a copper tube of small diameter, which traversed a glass door. The vapors escaped freely and the saturation of the large ward and the annexes was obtained about 10 a.m. The apparatus continued to work till noon. It was then stopped, and we found in the autoclave two litres of formaldehyde. We had used four litres of the solution.

"Before starting the apparatus, the outside openings of the wards were closed in the ordinary way, except some places where the openings were too large: these were stuffed.

"Besides, we placed in the three wards little pieces of linen, about two centimetres square, previously sterilized and then sown with young and virulent cultures of the following micro-organisms: (1) Staphylococcus aureus; (2) bacillus coli communis: (3) Klebs Loeffler bacillus; (4) bacillus of glanders: (5) spores of bacillus anthracis; (6) bacillus pyocyanicus: (7) chicken cholera bacillus: (8) spores of young aspergillus: (9) spores of trichophyton.

"We scattered on the floor at *a*, *b*, *c*, under the beds and the curtains different specimens of each of these organisms. We also



arranged them along a bandage running from floor to ceiling. Pieces of linen, sown with micro-organisms, were put away in the drawer of a table of the annex at *d* and at *e*; under clothes heaped together in the large ward: in the pocket of a coat in the centre of a mattress which was not broken up, and under another mattress which was folded on itself. We also placed, at different spots in the large ward, dust collected from the laboratory of pathological anatomy; earth taken in front of the pavilion for contagious diseases; sputa of tubercular patients, microscopically verified,

dried on linen, mixed with sterilized sand, or spread out in the wet state and forming a layer from one to two millimetres in depth.

"Some of these specimens were dry, others almost dry, and others moist. Of the latter, some were contained in open test tubes, others were not. Spores of aspergillus were left in an uncorked flask, and we also exposed an old, dried culture of aspergillus on carrot as well as a culture of trichophyton on gelose. The disengagement of the vapors lasted from 9.30 a.m. till noon, or two and a half hours. The apparatus being stopped, we allowed the disinfectant gas to operate until next day (14th March) at 9 a.m., that is to say, for twenty-four hours. The wards at that time still smelled strongly of formol. At 5 p.m., that is to say, after about six hours' exposure, we withdrew some samples by entering the ward in such a manner as to allow the smallest possible amount of outside air to penetrate into it; we then placed in large mouthed sterilized flasks, with sterilized forceps, several little pieces of linen. We withdrew some more at 9 a.m. next day."

Without enumerating the details, the results of these experiments are thus given by Dr. Bose:

"(1) The dry vapors of formaldehyde, at saturation, destroy, at the end of five hours of activity, pathogenic germs on DRY pieces of linen well exposed to these vapors.

"(2) Specimens ALMOST DRY were also destroyed under the same conditions.

"(3) These germs were destroyed in every part of the ward into which the vapors were thrown, as well as the adjoining annexes, in spite of their large size (737 cubic metres).

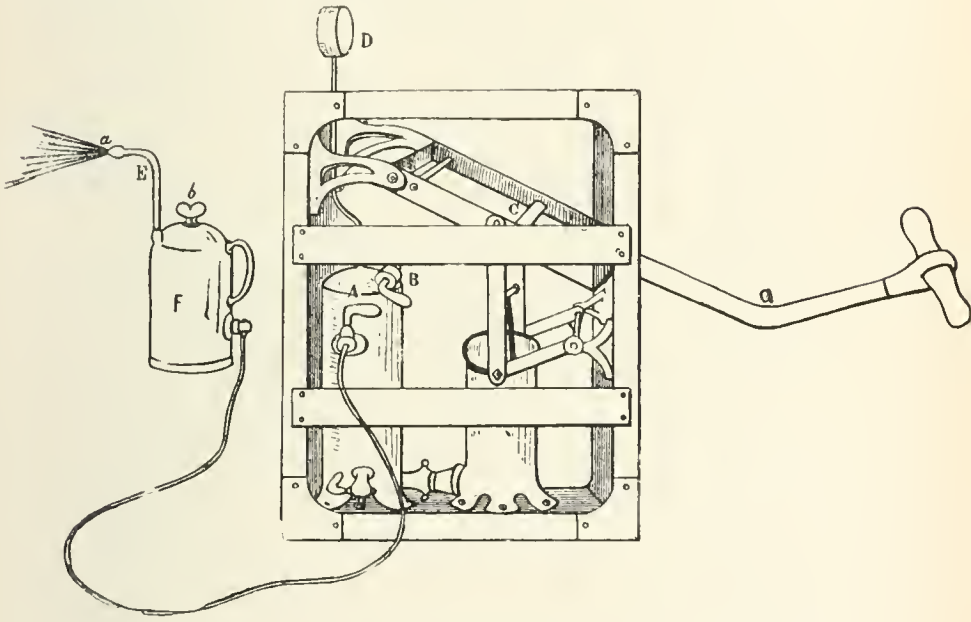
"(4) The spores of pathogenic germs were destroyed as thoroughly as the microbes, when dry, and even when covered to a certain extent. The dust of the wards and their walls was disinfected, and in outside dust from the laboratory or the ground only the spores of bacillus subtilis and bacillus mesentericus survived, which makes no difference from the standpoint of practical disinfection.

"(5) Points in direct contact with the vapors of formol were disinfected. When contact was difficult, the result was more doubtful; thus of two specimens placed in a coat pocket, whose flap was turned down, one (staphylococcus) was killed, while the other (bacillus coli) resisted and yielded a feeble culture on the fifth day. The staphylococcus put under a heap of clothes resisted, as did also anthrax put into the centre of an unbroken mattress. Wool taken

from the centre of the latter gave cultures of streptococci. On the contrary, the sample placed in a mattress, simply folded on itself, was destroyed.

"(6) The *wet* samples were destroyed under the same conditions as the dry or those almost dry, where they were exposed on every side to the vapors of formol. When put in test-tubes, open at one end, some of the specimens were killed, others resisted.

"(7) The bacillus tuberculosis was killed in dry sputum, in sputum triturated with sterilized sand and dried, and even recent wet sputa, spread on squares of linen, in layers of from one to one and a half millimetres, were disinfected.



"(8) These facts lead me to the conclusion that, in order that disinfection should be effective, the vapors of formol must come in contact as freely as possible with all points of the object. Folds of cloth or objects which are heaped together, should be avoided; linen or garments should be spread out on the ground or hung on lines. The pockets of garments should be turned inside out, and the contents of mattresses should be removed and spread out. After the disinfection, air should be admitted to the room, and it may be entered with safety in a quarter of an hour, the windows remaining open. After two days of ventilation no odor will be left, even when the room is shut up.

"(9) I should add that the vapors did not spoil any of the objects, of any nature or any color, which were placed in the ward, and that the entire performance seemed to me easy, of short duration, and demanding very little overseeing."

March 11, 1897, in the amphitheatre of the Montpellier Medical School, Dr. Bosc read a paper on "disinfection by dry vapors of formol, with exhibition of a new machine for practical disinfection by means of air or dry gases saturated with formol without the use of heat." I shall not give you his paper in full, but a description of the machine invented by him and some of his concluding remarks. Dr. Bosc said:

"The working of the apparatus, which is exhibited in the accompanying drawing, is very simple: so much so, indeed, that it can be operated by any person. The taps A and B being closed, the pump is worked by the lever C until the manoscope D marks three kilogrammes of pressure, which is indicated by a large red dash. The tap A is then opened, and instantly a large jet of vapor escapes by the orifice *a* of the tube E, the end of which has been pushed into the keyhole of the room to be disinfected.

"Previous to starting the pump, the solution, which generates the vapor, is poured into the recipient F, through the opening *b*, which is then carefully closed. An assistant continues to pump gently, so as to keep up a pressure of two kilogrammes.

"To make the bactericidal action of formol more energetic, and at the same time permit of a more rapid change of formol into dry vapors, I have made a mixture to which the name of compound-formaline has been given. Besides, to make matters easy for persons who wish to perform disinfection for themselves, I have thought it would be useful to put in a flask the exact quantity of the solution necessary, after my researches, to saturate with vapor an ordinary room of about sixty cubic metres, and I found that this operation could be done in from fifteen to twenty minutes.

"The use of the apparatus is therefore very easy, since all there is to do is to pour the contents of a flask into the saturator, F, close the tap A, pump so as to raise a pressure of three kilogrammes by the manoscope, then open the tap A, continuing by gentle strokes of the pump to keep the pressure at 2.

"The whole of the compound-formaline passes in the state of vapor, without any possibility of polymerisation, and by using this solution one may be sure of experiencing no difficulty on the part

of the machine. From the standpoint of disinfection I have made a full series of experiments which show that the vapors of compound-formaline exercised a bactericidal action superior to pure formol.

"Besides, the apparatus can be set to work immediately, and its application to disinfection can be made in any place owing to the easy transportation of the apparatus, and because no heating is required.

"It appears to me that the dry vapors of formic aldehyde, at saturation, which are diffusible, penetrating, free from danger, rapid and sure in operation, really appear to be the best disinfectant known. As they can be applied to all kinds of objects without risk of injury, and at a small expense, through my apparatus, you will agree with me that I have obtained the result I have been looking for; that is to say, to provide a sure process of disinfection accessible to everybody, and by that means to make the struggle against infection more active and efficacious, and in a large measure to place the preventive treatment of infectious diseases on an assured basis.

"We should particularly devote ourselves to struggle against the current infectious diseases—typhoid fever, diphtheria, scarlatina, erysipelas, measles and small-pox; they ought to engage our attention more than cholera and the plague, for the former strike their victims every day in an underhand manner by disseminated but repeated blows, and the total mortality from them is just as frightful as that resulting from epidemics which make a great noise. Besides, disinfection is exercised against these diseases more surely because it is done in limited centres, and because by acting with energy we can prevent the propagation of a disease.

"At the present time we ought to endeavor to prevent the march of tuberculosis. A prolonged action of the vapors of formol will kill the bacilli tuberculosis. The hygienist will therefore have in his possession a ready means which will enable him to insist on the disinfection of rooms and houses inhabited by tubercular patients or persons who are suspected of having that disease. Besides, it is not merely a question of considering the disinfection of apartments; it is also well to make sure of the disinfection of large buildings inhabited by a considerable number of persons, such as barracks, colleges, hospitals, prisons, etc., and you will remember that it is more important to disinfect clothing and personal property than the bare walls. These considerations are applicable also to the disinfection of lazarettos. In the total disinfection of a ship

it would be advantageous to employ, instead of air pressure, carbonic acid gas, which, owing to its high specific gravity, reaches every corner of the vessel.

"These vapors can also be used in the disinfection of silk-worm nurseries and in veterinary hygiene, which comes very close to preventive medicine in man."

From what has been just read, you will doubtless conclude with me that a distinct advance has been made in preventive medicine, and that Dr. Bosc is to be congratulated, especially on the useful invention he has placed at the service of the sanitarian. I hope that this Board will take an early opportunity of corresponding with Dr. Bosc and obtaining all necessary information about his disinfecting apparatus, so as to be in a position to advise the officers of local Boards who may wish to use it.

MONTHLY REPORT OF CONTAGIOUS DISEASE IN ONTARIO FOR MARCH, 1897.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

		Total Reported.	Per cent. of Whole Reported.
Total population of Province	2,233,117	1,351,222	60
" Municipalities	745	444	60
" Cities	13	10	77
" Towns and Villages	236	123	52
" Townships	496	315	63

VARIOUS DISEASES REPORTED.

Municipality.	Pop. Reported	Typhoid.		Diphtheria.		Scarlatina.		Tub'rcul'sis	
		Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum	Cases	Rate per 1000 per Annum	Cases	Rate per 1000 per Annum
Cities	358,161	3	.1	23	.7	16	.5	75	2.5
Towns and Villages	254,927	1	.05	14	.6	4	.2	25	1.1
Townships	738,134	2	.03	18	.3	6	.09	56	.9
Total Pop. Reported	1,351,222	6	.05	55	.4	26	.2	156	1.3

P. H. B.

Proceedings of Societies.

TRANSACTIONS OF THE CANADIAN MEDICAL ASSOCIATION—TWENTY-NINTH ANNUAL MEETING.

THE members of the Canadian Medical Association who were present at the meeting in Montreal last August, will be delighted to learn that the "Transactions" are now in book form and ready for distribution.

When taking up a volume like this, the most natural thing to do is to look for the names of the Publishing Committee, and we find Drs. A. D. Blackader and A. de Martigny, of Montreal, and A. H. Wright and A. A. Macdonald, of Toronto, together with the Treasurer, Dr. H. B. Small, of Ottawa, and the Secretary, Dr. F. N. G. Starr, of Toronto. To Dr. Blackader's untiring efforts, we are told, the production is largely due. All the addresses and papers read at the meeting appear, and at the back of the book there is a synopsis of the discussions and of the other business.

At page 187 we find a full report of the Committee on Interprovincial Registration. This in itself makes the volume worth possessing, for it appears to be the first time that anything like a satisfactory basis of agreement has been arrived at. Considering the fact that but a few years ago it was prophesied that the Association would die an unnatural death from debt and inanition, it is gratifying to find this volume of nearly two hundred pages upon our table. We have learned, too, in a note from the General Secretary, that there is but a small deficit, and that it is intended to meet this by the sale of a few extra copies at one dollar each to medical men who were not present.

We hope, now that the Association is in such a flourishing condition, that each year our study will be brightened by a copy of the "Transactions." F. N. G. S.

ONTARIO MEDICAL ASSOCIATION.

THE following is a list of papers promised for the approaching meeting of the Ontario Medical Association: Discussion of "The Present Status of the Radical Cure of Hernia," led by G. A.

Bingham, Toronto; "Serum Therapy in Medicine," led by J. L. Davison, Toronto; "Albuminuria of Pregnancy," led by R. W. Garratt, Kingston, followed by C. Gordon, Toronto.

"The Clinical Value of Inflation of the Stomach," H. L. Elsner, Syracuse, N.Y.; "The Treatment of Ulcers," Seneca D. Powell, New York City: "Nervo-motor Dyspepsia," H. J. Hamilton, Toronto: "Treatment of Eclampsia," W. J. Wilson, Toronto: report of case, J. W. S. McCullough, Alliston; "Injury to the Spinal Cord," report of cases, G. A. Peters, Toronto: "Remarks on Modern Therapeutics," J. T. Fotheringham, Toronto; "Streptomycosis," J. C. O. Hastings, Toronto; "A Case of Gangrene of the Rectum," L. Teskey, Toronto; "Two Unnamed Diseases," James Samson, Windsor; paper, B. E. McKenzie and H. P. H. Galloway; "A Severe Case of Gonorrhœa in Irido-cystitis," G. H. Burnham, Toronto; "Report of a Case in Midwifery," J. Arthur Williams, Ingersoll; "Pain, and Some of its Aspects," D. C Meyers, Toronto; paper, A. Hanks, Blenheim; "The Cottage Sanitarium Treatment of Pulmonary Phthisis," N. A. Powell, Toronto; "Should the Medical Profession of Ontario be Self-Governed?" J. W. McMcLaughlin, Bowmanville; "Abscess of the Lung," report of case, J. S. Hart, Toronto; "A Plea for Radical Operation for Hernia Among the Insane," A. T. Hobbs, London: "The Value of Aseptic Methods in the Treatment of Pus Cavities," A. Primrose, Toronto: "Tuberculosis of the Liver," R. W. Whiteman, Shakespeare; "Pneumonic Infection," H. B. Anderson, Toronto; "Leucocytosis," H. W. Parsons, Toronto: "My Experience with Gall-Stones," J. F. W. Ross, Toronto; "Pathological Card Specimens," W. Oldright, Toronto; "Experiences with the Schott Treatment of Heart Disease," H. Walker, Toronto. J. N. E. B.

Meeting of American Medical Publishers' Association.

The fourth annual meeting of the American Medical Publishers' Association will be held in Philadelphia, on Monday, May 31st, 1897 (the day preceding the meeting of the American Medical Association). Editors and publishers, as well as everyone interested in medical journalism, are cordially invited to attend, and participate in the deliberations. Several very excellent papers are already assured, but more are desired. In order to secure a place on the programme, contributors should send titles of their papers at once to the Secretary. Chas. Wood Fassett, St. Joseph, Mo.

The Canadian Journal of Medicine and Surgery

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Orthopedic Surgery—B. E. MCKENZIE, B.A., M.B., Toronto, Surgeon Victoria Hospital for Sick Children; Clinical Lecturer, Orthopedic Surgery, Toronto University; Assistant Surgeon, Ontario Medical College for Women; Member American Orthopedic Society; and H. P. H. GALLOWAY, M.D., Toronto, Orthopedic Surgeon, Toronto Western Hospital.

Oral Surgery—E. H. Adams, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

Medicine—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and W. J. WILSON, M.D., Toronto, Physician Toronto Western Hospital.

Gynæcology and Obstetrics—H. T. MACHELL, M.D., Toronto, Visiting Physician, Hospital of St. John the Divine; Professor of Obstetrics, Woman's Medical College, Toronto; and J. H. LOWE, M.D., Toronto.

Medical Jurisprudence—W. A. YOUNG, M.D., L.R.C.P. Lond., Eng., Toronto.

Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, Resident Physician, Toronto Asylum for the Insane.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

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VOL. I. TORONTO, MAY, 1897. NO. 5.

Editorials.

DIETETICS IN MEDICINE.

THE teaching of correct methods of cooking food, though nothing really new may be advanced, is certainly commendable, and a practical working knowledge of cooking plain victuals, and preparing suitable food for the sick, is of more importance to the average woman than a little smattering of algebra. The preparation of food for the table is probably the most important function in the daily routine of a household. To know how to do this work properly, or to be able to supervise it, when done by another, should

therefore be a prime necessity for a housekeeper. Were this knowledge regularly exercised, it would result in a lessening of the expenses of housekeeping by providing only suitable food, and preventing waste. It would also bring about a great improvement in the method and skill with which the viands are prepared for the table.

In order to make this knowledge, which is not at all too common, more general, and to enlist in the work the better class of women—many of whom hold back because they think cookery is suggestive of a menial office—it has been proposed that the principles and art of cooking should be taught in the High Schools of the Province. Physicians, who know that artistic cookery requires for its completion and rounding out at least an elementary knowledge of physics, chemistry, physiology and hygiene, can easily understand that a well-designed course on cookery can be made interesting and instructive to an extraordinary degree. If taught in the High Schools it is quite likely, however, that the more important demonstrations in cookery would assume a post-graduate character. This, however, need not be a disadvantage, as the principles which underlie the art can be taught during the ordinary High School course under the various heads already mentioned. Practical work can follow when the student, no longer a High School girl, desires to get a real knowledge of the art of cooking.

Without attempting to discuss in this article the scientific points which lie at the basis of the preparation of food for different classes of persons in health, for patients affected with various diseases, and for persons who enjoy average health, but who have constitutional peculiarities, we think that an effort should be made by physicians and nurses to pay greater attention to the selection and preparation of food intended for the sick. As indicative of what a school of medicine may do in helping on so worthy an object, we learn, through an esteemed contemporary, *The Philadelphia Polyclinic*, that "The College Settlement has established in Philadelphia a kitchen, the aim of which is to give to the people carefully prepared food, that will give the highest nutrition at the lowest cost. . . . Special attention is called to one branch of the culinary art, the growth of which is very slow—diet for invalids. A beef broth is prepared which is intended to replace beef tea. This broth is a food, not a stimulant only, there being retained between four and five per cent. of solid matter. It is prepared by a

careful method, which gives a uniform result. . . . In addition to this, other articles of sick diet are prepared: custards, jellies, koumyss, sterilized milk, etc Another feature of the kitchen work is its classes for women. To these are invited all who wish to get some knowledge of food and its preparation."

We understand that the managers of the Training School for Nurses at the Toronto General Hospital propose to add dietetics to their curriculum. This is a step in the right direction, and not a whit too soon. We know that the general training given at that school is thorough, and we believe that an accurate knowledge of cooking for the sick will be a most important addition to the special equipment of the nurse, rendering her services more helpful to the attending physician and of much greater value to the patient. J. J. C.

OPHTHALMIA NEONATORUM.

Results, obtained by various obstetricians, continue to show the value of a two per cent. solution of nitrate of silver in the treatment of ophthalmia neonatorum. We say obstetricians advisedly, because, though the disease in question may always be regarded as grave, and is really so in about five per cent. of the cases, it is frequently treated altogether by the accoucheur, instead of the oculist. Events, however, show that there is a certain scientific propriety in this extension of the multifarious duties of the accoucheur: for, the sooner the treatment is begun, the better is the result. A drop of a two per cent. solution of nitrate of silver, instilled into the eyes of an infant immediately after its birth, gives good results; but frequently it is not used until several hours or days have elapsed. When done immediately after birth, before the umbilical cord has been severed, the proportion of cases of ophthalmia is reduced by one-half, and the statistic is twice as favorable as it is in cases in which the little operation is delayed.

Dr. Valude, of Paris, who has made a practical study of this question, and prepared a statistic of the results obtained in his service, speaks favorably of the solution of nitrate of silver. He directs that a two per cent. solution be used, twice a day, with a hair-pencil. Not more than two applications should be made each day, and a new one should not be made until the white pelliele left from the former cauterization has disappeared. He is quite

opposed to the use of solutions of corrosive sublimate, even when they are as weak as 1-5000, and considers them decidedly injurious to the conjunctiva of the new-born infant.

Irrigations by a solution of permanganate of potash, 1-5000, or of boiled water, are excellent in mild cases, but insufficient in the severer forms of this disease. They should, therefore, not be employed as the sole means of treatment; but after the purulent discharge from the conjunctiva has been dried up by their use, a few drops of the nitrate of silver solution should be introduced. A solution of naphthol, containing 1½ grs. of extract of opium to the litre, diminishes suppuration and exercises a particularly favorable influence in reducing the swelling of the tissues.

Solutions of boracic acid are useful in the simpler cases, just as boiled water is, but they cannot cure severe cases. In Dr. Valude's opinion, when a real ophthalmia appears in a new-born child, solutions of boracic acid and permanganate of potash will not suffice: the nitrate of silver solution (two per cent.) must be used to effect a cure of the disease. J. J. C.

THE VICTORIAN ORDER OF HOME HELPERS.

What form shall the Jubilee memorial take? For it is the good pleasure of her Canadian subjects to laud the praises of Victoria the Good.

The scheme which the Countess of Aberdeen proposes to carry out this Jubilee year seems hardly practicable. The daily papers, and public meetings called in the cities and towns, have made all Canadians conversant with the details of the system of "The Victorian Order of Home Helpers," or free nurses. The money required ($1,000,000) may not be forthcoming, unless Her Excellency the Countess of Aberdeen should donate the half of the amount; then possibly some of the few wealthy Canadians may contribute the balance. No doubt the Queen would be duly edified by this expression of loyalty, and all would go "merry as a marriage bell." All, did we say? No, not all: for "poverty throws on some its pall," and there is more than sentimental loyalty to be thought of; hard, cold facts stare us in the face. First, there are numbers of nurses, graduates of our best hospitals, who have spent their best time in careful preparation for their work, and who

are unable to obtain enough to do to support themselves: *the supply is already much greater than the demand.*

Will it be wise for the people to contribute to an undertaking that will aim to flood the country—the cities especially—with hundreds more of half trained "helpers" entirely free of charge, or at "bargain day" prices? Are they needed? Look at the cities. Surely there is almost too much, certainly enough, organized charity already; plenty of kindness and nursing for the really poor can be procured in less than an hour's time, as every physician knows. Where money is absent, and the patients must be cared for in the dwelling places they call homes, a cheery nurse from "The Nursing at Home Mission," a gentle faced Sister of Charity, or representatives from one of the many other, too numerous to mention, organizations banded together to help suffering humanity are ever and always ready to answer the call for assistance. Surely the question is answered. The "helpers" are *not* needed in the cities.

Are they wanted in the country? The average Canadian farmer is industrious, and (excuse the remark) *abominably* healthy, and the average farmer's wife appears capable of looking after her household, and the instances are very rare indeed (except perhaps in the very far North-west land) where any are entirely out of the reach of a country practitioner and the services of a friendly neighbor. The country physicians are slowly, but surely, being driven to pitch their tents in the overcrowded cities and towns, and why? Because they cannot make a living. Then why, in an excess of loyal jubilation, take their last crust from them by supplanting them by nurses who, among those who will *accept* their free ministrations, will be considered "just as good as the doctor." Last and least, what is to be the fate of her antique awfulness "Sairey Gamp," poke bonnet, woollen gloves and shiny satchel, the landmark of every village and country side? Will *she* come into the city too, and be included in the next census?

Let the Canadian Jubilee memorial take whatever form it may, no deeper or truer tribute of homage will go from the hearts of any of the subjects of that royal woman, and noble Queen, Victoria, than from those who live under the shade of the maple tree. But let Canadians consider well what they are doing before giving their sanction to a scheme which may in a measure still further help to depopulate this land by crowding out, through filling their places by these "helpers," those already trained for nursing, but

who have too much respect for their calling to eat the bread of charity by joining this organization.

If such a scheme as this should prosper, it will not be long until the physicians will be crowded out also, and the chorus "The Maple Leaf Forever" may end ere long in the sad song, "We had to leave Canada because we were poor."

The physicians of Canada are men and women who have spent too much time gaining the knowledge they possess at the universities of Europe and America to barter that birthright for a "mess of pottage." They are men and women who are well equipped for the work they have undertaken, and to whom the citizens of this land owe the respect and courtesy due to "laborers worthy of their hire." W. A. Y.

CATTLE INSPECTION: ACTION OF THE GOVERNMENT IN SUSPENDING THE TUBERCULIN TEST.

Acting under strong representations made to it, the Government of Ontario has introduced, and the Legislature has passed a clause suspending Section 4 of the Act, passed in 1896, for the inspection of meat and milk supplies in cities and towns. This section provided for the inspection of milch cows and the application of the tuberculin test.

The agitation, which resulted in this action, was largely on the part of dairymen who supply the city of Toronto with milk. They claimed that it was unfair to make them bear the cost of applying the tuberculin test, and, that if animals pronounced tubercular were slaughtered, without compensation, it would mean ruin to the owners.

In all probability the whole question will be reopened one year hence, at the next session of the Ontario Legislature. Should the people of Ontario be determined to have milk free from tuberculosis, they must be prepared to pay a higher price for milk than what obtains at present. Should the Legislature reintroduce the suspended clause it may also find it necessary to make some provision for compensating the owners of cattle slaughtered under the provisions of the Animal Contagious Diseases Act of Canada.

We heartily endorse the law relating to inspection of meat and milk supplies and we believe that any retreat from the positions taken in that Act would not be in the interest of the

public health. The Ontario Government, however, has acted prudently in suspending Section 4 until such time as the Legislature and people of the Province thoroughly understand the loss and gain which would result from the enforcement of the regulations founded on that section.

When this question is again brought before the Legislature, we confidently expect that the suspended clause will be declared valid, and we think that a bill will be introduced and carried providing compensation in some way for dairymen whose cattle are slaughtered as a result of the application of the tuberculin test.

J. J. C.

DISINFECTION BY FORMOL AND DR. BOSC'S APPARATUS.

At page 209 we publish a report on disinfection by the dry vapors of formol and a description of a new apparatus for applying the same, recently invented by Dr. F. J. Bosc, of Montpellier, France. As Dr. Bosc says: "It has been demonstrated by scientific methods that the saturation of rooms by the dry vapors of formol constitutes the very best method of disinfection known at present."

Trillat succeeded in producing these vapors by heating formol under pressure. Placing in an autoclave a solution of formo chloral, and heating it with a pressure of from three to five atmospheres, he obtained vapors of formol in great abundance. The use of the autoclave, however, is open to some serious objections. It necessitates the use of heat, gas in particular, which is not always available. The heating of chloroformol causes a great loss of formol by partial polymerisation, and under the influence of solid products, which form in the autoclave, a choking of the capillary tube which delivers the vapors outside is easily produced. This accident stops the working of the autoclave just when its services are required. Then, as the pressure in the autoclave has to be kept up to four or five atmospheres, the use of this machine may prove dangerous in practice, and therefore requires attentive observation

These inconveniences make each disinfection expensive, and, if we add to that the high price of the machine itself, it will be seen that Trillat's autoclave is beyond the means of the majority of people.

Dr. Bose's apparatus is not open to any of these objections. It requires no skilled supervision, and can be worked by anyone; gentle pumping, keeping up the required air pressure of two kilogrammes. It can also be started working instantaneously, and is so simple in structure, that there is very little likelihood of any of the parts getting out of order. As it is easily transported from place to place, and does not require heating, it can be used for disinfection in any place. Dr. Bose contends that the compound-formaline solution is superior to plain formol, inasmuch as its bactericidal action is more energetic, and at the same time it allows a more rapid change of formol into dry vapors. He also recommends that it be sold in bottles of different sizes, each bottle containing the exact quantity of the solution necessary to disinfect a room of a certain known size.

All this seems quite reasonable. As the whole question is of great moment we shall, as soon as possible, obtain further information, showing the cost of the solution and the disinfecting machine, laid down in Canada. J. J. C.

"SAWBONES" CRICKETERS.

Physicians who are interested in cricket matters, will be pleased to hear that through the exertions of Drs. Harrington, Smith, and Caugham, special inducements have been offered the medical profession by the Rosedale Cricket Club. For the small fee of $7.00 per annum a ticket is issued, admitting its holder to all the privileges of the Toronto Lacrosse Club, Toronto Athletic Club, and the Rosedale Cricket Club. This is a special courtesy extended to the profession, and everyone desirous of spending a spare hour pleasantly during the hot months of the summer, would do well to take advantage of this opportunity.

The German Government is sending out invitations to an International Congress on Leprosy, to be held in Berlin in October, at which Dr. Koch, bacteriologist, will preside. The whole subject of leprosy and its attendant evils will come under consideration, and the report will be issued with a view of inducing the powers of the world to act collectively, if not in the hope of stamping out the disease, at least of keeping it within prescribed limits.—*Ex.*

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Nose and Ear, Deformities of. M. F. McTaggart, M.D. (14) April 3rd.
Nævus, Diffuse Spreading. J. M. White, M.D. (7)
Nasal Septum, Deviation of. E. W. Heltman, M.D. (20)
Nerves of the Peritoneum. B. Robinson, M.D. (1) April 17th.
Neurasthenie et Paralysie Generale. M. E. Regis (47) April 7th.
Nausea and Vomiting of Pregnancy. E. P. Davis, M.D. (59)
Nursing of the Eye after Injuries. C. D. Wescott, M.D. (9)

Occipito-Posterior Positions. E. T. Glass, M.D. (46)
Ophthalmia Neonatorum. A. E. Adams, M.D. (3) April 3rd.
Otology, Diseases of the Auditory Canal. P. E. Howes, M.D. (15)
Obstetric Nursing. R. R. Kime, M.D. (4)
Origin of the Vertebrates. S. Jenkins. (21)

Posture in the Diagnosis of Disease. R. H. Sayre, M.D. (31)
Pneumonia in Children. J. C. DaCosta, M.D. (17)

Pelvic Abscess. J. J. Berry, M.D. (18)
Placenta Prævia. J. I. Pennington, M.D. (5)
Physical and Therapeutic Facts on Static Electricity. F. A. Bishop, M.D. (45)
Pelvic Abscess, Treatment, Special Reference to a New Method. N. Macphatter, L.R.C.P. (50)
Pharmacy Examination in Australia. O. Oldberg (32)
Puerperal Mastitis. G. Covert, M.D. (55)
Purpura Hæmorrhagica. L. Weber, M.D. (3) April 10th
Pyloroplasty. T. Oliver, M.D., etc. (57) April 13th.
Paralysis of the Sixth Nerve. D. J. Wood. M.B. (57) April 13th.
Preventive Medicine, Some Possibilities of. A. R. Reynolds, M.D. (36)
Phthisis Communicated from Husband to Wife. W. Murrell, M.D. (2) April 10th.
Peritoneal Operations (forty-one). G. E. Shoemaker, M.D. (14) April 10th.
Pernicious Malarial Fever in a New-born Child. V. Caldwell, M.D. (9)

Removal of Large Neoplasms of the Naso-pharynx. J. A. Wyeth, M.D. (3) April 3rd.
Renal Tuberculosis. F. T. Brown, M.D. (3) April 3rd.
Renal and Vesical Calculi. J. Bell, M.D. (11)
Renal Tuberculosis. F. T. Brown, M.D. (3) April 10th.
Rothstein's Intra-Uterine Drainage Tube. H. Rothstein. (35)
Rapports Pathologiques Entre le Nez et les Yeux. M. A. Castex (44) April 9th.
Refraction of the Eyes of One Thousand School Children. W. M. Carhart, M.D. (3) April 17th.
Railway Surgery. J. C. Hunt, M.D. (9) April 20th.

Skiagraph of an Aneurism. O. L. Schmidt, M.D. (17)
Senile Endometritis, or Senile Metritis. S. E. Sheldon, M.D. (17)
Static Electricity. F. A. Bishop, M.D. (5) April 3rd.
Syphilis, The Treatment of. H. A. Robbins, M.D. (5) April 3rd.
Suppurative Nephritis G. S. Harrington, M.D. (46)
Scrofula-Nuclein Solution. J. I. Dowling, M.D (46)
Surgical Cases, A Report of. J. O'Conor, M.D (3) April 3rd
Septic Peritonitis. E. H. Grandin, M.D. (1) April 3rd.
Sepsis, The Prevention of. C. H. Harris, M.D. (50)
Sketches of Dan Yen Den. (32)
Sebaceous Tumors and Their Cure. A. B. Patterson, M.D. (4)
Speech Defects. G. H. Makuen, M.D. (56) March 1st.
Stricture of the Urethra in Male Children. L. B. Bangs, M.D. (1) April 10th.
Syphilis, The Treatment of. H. A. Robbins, M.D. (5) April 10th.
Scarlet Fever, Undefined Cases of. F. Dittmar, M.D. (2) April 3rd.
Sleep Induced. Learned M.D. (36)
Scarlatinal Synovitis. M. A. Bunce, M.D. (12) April 17th.
Sporadic Cretinism. D. L. Moore, M.D. (39)
Septic Pelvic Disease, etc. F. Henrotin, M.D. (59)
Shock in Obstetric Surgery. H. C. Coe, M.D. (59)

The Magnetic Extraction of Intubation Tubes J. Bartlett, M.D. (40)
Tubercular Meningitis. A. Money, M.D. (31)
Tubo-Ovarian Congestion Simulating Appendicitis. J. C. Macevitt, M.D. (30)
Tuberculosis, Treatment of. N. S. Davis, jun., M.D. (17)
That Curious Fever. J. J. Waller, M.D. (6)
Therapeutics. J. R. Wood, M.D. (46)
Tuberculosis, Pulmonary, and the Board of Health. W. L. Baner, M.D. (3) April 3rd.
Three Hundred Thousand Dollars a Year to Cheap Hospitals and Cheap Doctors of St. Louis. E. Lanphear, M.D. (50)
Therapeutic Application of Chloroform in Labor. J. N. Upshur, M.D. (4)
Ten Things Either Known or Worth Knowing. W. Parcells, M.D. (25)
Talipes Equinus. J. Bell, M.D. (11)
Typhoid Fever from the Serum, Diagnosis of. C. A. Elsberg, M.D. (1) April 10th.
Turbinectomy. J. A. Stucky, M.D. (20)
Technique of Operations for Laceration of the Pelvic Floor in Women. C. P. Noble, M.D. (59)
Tests for Visual Malingering and Hysterical Blindness. E. Jackson, M.D. (14) April 17th.

Uterine Displacements, Etiology and Pathology of. M. A. Crockett, M.D. (22)
Umbilical Growths of Infants and Young Children. J. H. DeVilliers, L.R.C.P. (31)

Uniocular Epicanthus with Unusual Ætiology. V. Gomez, M.D. (3) April 17th.

Vera Montanum, Diseases of. W. F. Glenn, M.D. (13)

Vaginal Ligation of the Uterine Arteries for Uterine Fibromata. A. H. Goelet. (50)

Vocal Strain and its Prevention. Prof. W. Hallock and F. S. Mackey, M.D. (54)

Vaccination, Protective Value of. B. L. Roy (55)

Vaginal Hysterectomy, Early Diagnosis of. J. J. Goggans, M.D. (4)

Wandering Œdema. E. W. G. Masterman, F.R.C.S. (57) April 3rd.

Yellow Exhaustion and White Exhaustion in Appendicitis. R. T. Morris, M.D. (18)

W. A. Y.

Key to Medical Publications.

1. Medical Record, N.Y.
2. The Lancet, London, Eng.
3. New York Medical Journal.
4. Atlanta Medical and Surgical Journal.
5. Maryland Medical Journal.
6. Medical Summary, Philadelphia.
7. Scottish Medical and Surgical Journal, Edin.
8. Journal of Medicine and Science, Portl., Me.
9. The Railway Surgeon, Chicago.
10. Archives of Pediatrics, N.Y.
11. Montreal Medical Journal.
12. Philadelphia Polyclinic.
13. International Journal of Surgery, N.Y.
14. Medical and Surgical Reporter, Philadelphia.
15. American Medical Journal (Eclectic), St. Louis, Mo.
16. Medical Bulletin, Philadelphia.
17. Medicine, Detroit.
18. New England Medical Monthly and The Prescription, Danbury, Conn.
19. Canadian Medical Review, Toronto.
20. The Laryngoscope, St. Louis.
21. The Medical Age, Detroit.
22. Buffalo Medical Journal.
23. Cleveland Medical Journal.
24. The Therapeutic Gazette, Detroit.
25. Langsdale's Lancet, Kansas City.
26. Pacific Medical Journal, San Francisco, Cal.
27. American Journal of Medical Science, Phila.
28. The Maritime Medical News, Halifax.
29. The State Hospitals' Bulletin, Utica, N.Y.
30. Brooklyn Medical Journal, N.Y.
31. Pediatrics, N.Y.
32. Bulletin of Pharmacy, Detroit.
33. Magazine of Medicine, Atlanta, Ga.
34. North American Practitioner, Chicago.
35. St. Louis Medical and Surgical Journal.
36. Chicago Medical Recorder.
37. Medical Press and Circular, London, Eng.
38. Medical Brief, St. Louis.
39. Columbus Medical Journal, Columbus, O.
40. Chicago Clinical Review, Chicago.
41. The American Therapist, New York.
42. The Pacific Health Journal, Oakland, Cal.
43. The Diabetic and Hygienic Gazette, N.Y.
44. La France Medicale, Paris.
45. Medical Standard, Chicago.
46. The Medical Times, New York.
47. La Presse Medicale, Paris.
48. Le Progres Medical, Paris.
49. Quarterly Journal of Inebriety, Hartford, Conn.
50. American Journal of Surgery and Gynæcology, St. Louis.
51. The Homœopathic Physician, Philadelphia.
52. Mattbews' Quarterly Journal of Rectal and Gastro Intestinal Diseases, Louisville, Ky.
53. California Medical Journal (Eclectic), San Francisco, Cal.
54. Journal of Eye, Ear and Throat Diseases, Baltimore, Md.
55. Chicago Medical Times.
56. The Indian Lancet, Calcutta, India.
57. The British Medical Journal, London, Eng.
58. Annals of Gynæcology and Pediatry, Boston.
59. The American Gynæcological and Obstetrical Journal.
60. American Practitioner and News, Louisville, Ky.
61. The Medical Examiner, New York.

The Physician Himself.

Dr. Warren, who resided on Gerrard Street East, has removed from Toronto.

Dr. J. F. W. Ross has been elected President of the Toronto Athletic Club.

Dr. J. W. Rowan, we are glad to note, has quite recovered from a recent illness.

On April 4th, at 116 McCaul Street, to Dr. and Mrs. D. A. Dobie, a daughter.

Dr. McDonagh, of Carlton Street, left for England last month. He will be absent for several weeks.

Dr. C. F. Moore, of College Street, spent a few weeks pleasantly in Washington, D.C., last month.

Dr. Garratt is to be congratulated upon the outcome in his favor of the recent Assize Court action.

Dr. Sloan, who has been in practice in Parkdale for some years, has removed to Seaforth, Ont., where he previously resided.

We are pleased to announce that Dr. W. H Pepler, of John Street and Dr. A. H. Garratt, of Bay Street, have quite recovered from a severe attack of diphtheria.

Dr. Frederick Winnett, of Sherbourne Street, and Miss Morrison, of Jarvis Street, were united in marriage on April 13th The honeymoon is being spent in Burmuda.

Drs. B. E. McKenzie and H. P. H. Galloway have erected a handsome residence and splendidly equipped gymnasium on Bloor Street East; they hope to remove there in October.

Dr. James Thorburn has been appointed President of the Department of Pharmacology in connection with the meeting of the British Medical Association in Montreal in August.

One of Hamilton's oldest physicians passed away on April 15th, in the person of Dr. William McCargow. He was in his 78th year. He had been ill about eight weeks, the result of a fall. Dr. McCargow has been in practice for eighteen years in Hamilton, having resided formerly in Caledonia.

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The Physician's Library.

Over the Hookah, The Tales of a Talkative Doctor. By G. Frank Lydston, M.D., Fellow of the Chicago Academy of Medicine, the Southern Surgical and Gynæcological Association, and the American Academy of Social and Political Science; Professor of Criminal Anthropology in the Kent College of Law; Member of the American Medical Association, and the Association of Military Surgeons of the United States; Honorary Fellow of the Texas Medical Association. Illustrated from the Author's designs by Mr. C. Everett Johnston. Chicago: Fred Klein Co. 1896.

The constant reading of purely medical literature becomes at times dry and tiresome, and to the physician a little change to something lighter is most acceptable. "Over the Hookah" is one of the most amusing books it has been our pleasure to read for some time past. Its perusal gives rise to many an hour's enjoyment, as it portrays to a nicety the most ludicrous as well as the most serious incidents of a doctor's busy career. The chapter entitled "Several Kinds of Doctors," is inimitable, especially the sketch of the country practitioner. The writer's description of "several kinds of doctors" is exceedingly well-written. We heartily recommend this book not only to every follower of Esculapius, but to all those in search of a thoroughly amusing work.

The International Medical Annual and Practitioners' Index. A work of reference for medical practitioners. Fifteenth year. New York: E. B. Treat, 241-243 West 23rd Street; Chicago: 199 Clark Street. Price, $2.75. 1897.

To members of the medical profession, who are accustomed to refer to this medical Annual from year to year, it will only be necessary to state that the volume for 1897 is fully up to date in all the various departments.

When one considers the enormous production of new work, and the revision of much that is old, appearing in monographs and medical journals, the labor involved in the preparation of the Annual is seen to be very great. As the editors say, however, "they have endeavored by careful condensation, and by selecting information which has a direct bearing upon the daily work of the practitioner, to retain the work within reasonable limits."

The Annual is a handy volume, well printed on good paper, and containing a number of plain and colored illustrations. It will prove useful to the progressive physician, who wishes at a small outlay to keep up with the march of improvement and discovery in medicine.

BOOKS RECEIVED.

Report relating to the Registration of Births, Marriages and Deaths in the Province of Ontario, for the year ending 31st December, 1895. Printed by order of the Legislative Assembly of Ontario. Toronto: Warwick Bros. & Rutter, Printers, 68-70 Front Street West. 1897.

The Board of the Ontario Medical Library desire to acknowledge the receipt of Vol. I., "American System of Medicine," and eight volumes of Transactions of American Orthopædic Association.

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

VOL. I. TORONTO, JUNE, 1897. NO. 6.

Original Contributions.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

CRIME AND CRIMINALS.

BY A. B. EADIE, M.D., TORONTO.

THE history of crime dates from the earliest history of mankind. Whether crime is increasing or not is a difficult problem to settle. Statistics bearing on the point are not entirely satisfactory, yet they seem to show that in most countries crime is increasing.

We propose to deal mainly with the causes of crime and the treatment of criminals. Benedict says: "The brains of criminals exhibit a deviation from the normal type," and again: "The essential ground of abnormal action of the brain is abnormal brain structure." If these statements are true in all cases, then our conceptions of crime and the treatment of criminals should be greatly modified if not entirely altered. Are these statements true? Is it a fact in the case of every criminal that the brain does not perform its functions properly because of disease in the brain itself or in some other organ? Flint in a paper on the "Scientific Treatment of Crime and Criminals" makes the following statement: "It may fairly be assumed that no mental disturbance taking the form of insanity is without a physical cause, however obscure

this cause may be." He then asks the question, "Is it possible that every moral delinquency has a physical cause?" or in other words, is every criminal diseased physically and does he commit crime as a result, and only as a result of that physical disease?" Very few medical men, I think, would care to answer these questions in the affirmative, and yet what data have we at hand upon which to base a rational and intelligent conclusion?

All reasoning should be based upon carefully observed and well assorted facts. When a murderer is hanged his body is buried in the jail yard. Only the most formal post-mortem examination is made by a general practitioner who has little or no special knowledge or experience in microscopic or gross pathology. Could not this valuable material be made to shed much light upon the causes of crime? Paupers, chronic alcoholics, and those who have been convicted of petty crimes from time to time, die in our jails and almshouses. A thorough post-mortem examination of these subjects by a competent pathologist would produce an abundant supply of reliable facts from which criminologists could draw sound and scientific conclusions. These facts would not only throw light on the causes of crime, but would assist in the diagnosis and classification of criminals. It is a well known fact that disease of other organs, apart from the brain, may have a powerful influence over the disposition and conduct of an individual. Patients with anæmia are apt to be melancholy, morose and irritable. Chronic diseases of the heart, such as valvular incompetency and obstructions, fatty degeneration or congenital smallness may profoundly alter the cerebral circulation and thus cause a deviation from the normal function of the brain. Puerperal mania is a familiar example of how the brain may be affected by a toxic influence circulating in the blood.

A large number of prisoners in penitentiaries have physical defects that are plainly visible. Some experienced wardens state that as many as seventy-five per cent. of prisoners have such visible defects. In many cases one side of the head is larger than the other, showing either partial arrest or other abnormal development of the brain. Such defects are well illustrated by the following report in Inspector Byrne's book, "The Professional Criminals of America." Report No. 2. David Bliss, alias Dr. Bliss, sneak: thirty-nine years old in 1886: born in U.S., married: doctor: slim built, height five feet eight inches and a half, weight one hundred and thirty-five pounds, light-colored hair turning gray, gray eyes,

long face, light complexion, has a hole on the right side of forehead, etc. This man was evidently well fitted by education to become a useful member of society. Does the hole in his forehead give us any clue to the reason why he was a vagabond? A long series of carefully made post-mortems would certainly assist much in answering all such questions. An accurate diagnosis is a first requisite to intelligent treatment. In general terms, we may put criminals into one of two classes, the curable and the incurable. For the safety of society, the latter should be placed under permanent restraint, while the former should be placed in such surroundings and under such discipline as is best calculated to restore them to useful citizenship. Two ideas appear to be prominent in the treatment of criminals in the present age—to punish those who are caught in such a way as to deter others, and the idea of revenge pure and simple. Revenge is a relic of barbarism and is entirely unworthy of an enlightened age. How far a severe punishment of one criminal deters another from committing a similar crime is hard to estimate. "Thirty days over the Don" appears to have very little effect in preventing drunkenness. Professional sneak thieves continue to make their raids in the face of heavy sentences pronounced on their less fortunate friends who are caught. Capital punishment has not put an end to murder. The two main objects in the treatment of criminals should be the prevention of crime and the cure of the criminal. With these objects in view, Flint suggests the idea of restitution in crimes against property. If a man steal, or embezzle a sum of money entrusted to his care, he should not be allowed complete liberty till he earns and pays back to the original owner the whole sum with interest at current rates. How can a lawyer, or a judge, or a jury, or all combined, determine what length of time a criminal should be detained in a jail before he will be cured of his physical and moral defect and fit to resume the duties and obligations of citizenship? It is precisely in this respect that our present system appears to fail. Why should incurable criminals be kept a year or two in jail and then turned loose again to commit some greater crime?

Very few would be sanguine enough to expect or hope that all crime could be prevented by any system, or that our knowledge will ever be so perfect that a correct diagnosis can be made in the case of every or nearly every criminal. Yet there is surely great room for improvement in our present methods of treatment of criminals. Crime is believed to be on the increase. In some

countries the increase has already begun to cause alarm. Lawyers and judges fail in their management of the criminal classes because their methods are founded on mere arbitrary precedent, without a due regard for the ever changing conditions and circumstances of an acutely progressive age. Medical science offers more hope for the future and promises to be able to show what is the real physical cause of crime. Physiology of the brain is defective and leaves us entirely in the dark in regard to many interesting and important phases of cerebration. Yet it plainly shows there is a logical and definite connection between normal brain structure and normal function as exhibited in the lives and acts of men. It remains for gross and microscopic pathology to point out what actual lesions exist in the brains of criminals. Then a rational and intelligent system of treatment will be adopted which will be in the interest both of the criminal classes and the general public.

PROSTATIC HYPERTROPHY.

BY T. H. MANLEY, M.D., NEW YORK.

Written specially for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

SINCE the distinguished Philadelphia surgeon, Dr. J. William White, has called the attention of the profession to the value of castration as a curative or relief measure in some of those cases of senile enlargement of the prostate which are so often a source of distress and misery in elderly men, there has been fresh interest given to the subject from the standpoint of pathology, inasmuch as a correct knowledge of this must determine our line of action when the serious question of unsexing an individual arises. First, let us for a moment consider what the functions of this organ are.

It is commonly classified with glands, but strictly speaking, from an anatomical standpoint, it is not, as its epithelial or secreting elements form but a minor proportion of its structure. In its parenchyma we find an abundance of erectile tissue, with considerable smooth muscle fibre in the trabeculæ. It presents many striking points of analogy with the uterus, in its great vascularity, its density and muscular frame-work. It is probably functionless, except in generation, and no one is conscious of its presence as a factor in the economy until the degenerative changes

of advancing years become manifest. Then those organic imitations commence which indicate its close analogy with the internal organs of generation in the female. The vascular elements first show signs of change with turgescence, congestion, interstitial inflammation. Next, we may have marked hypertrophy, with or without organic changes.

Neoplastic degeneration, with a backward encroachment on the bladder, the out-growth of a prostatic bar or the "third lobe," as it has been designated, central suppurative or cystic changes have been noted. The serious local or constitutional disturbances, which are encountered in prostatic disease, succeed chiefly in consequence of the mechanical impediment offered to the escape of the urine. The residual urine undergoes decomposition, becomes ammoniacal and irritating, inflaming the vesical mucous membrane, the infection in time spreading up by way of the uterus to the kidneys.

So far, in the late extensive literature on this subject, it does not appear that any writer has considered the influence of diathesis as an etiological factor. This is unfortunate, for anyone who has treated many of these well knows that in a considerable number of cases constitutional as well as local treatment effects most gratifying results.

Castration is well known to promptly induce atrophic changes in the prostate of lower animals, but whether it will do so in the old man whose testes are greatly diminished in functional activity, if this is not entirely suppressed, places another aspect on the question. No doubt but in the virile, whose prostate are simply intumescent or turgescent, without having undergone organic changes, the same result may be attained by much safer and more conservative measures, by keeping the rectum well cleared, aseptic catheterization, by the use of sedatives to the entire urinary tract, reduced or appropriate alimentation, etc. In the event of neoplastic formations, outgrowths or central, cystic or fibrogenous transmutation, the important question at issue is whether, even now, we may not by tentative expedients, judiciously and skilfully utilized, spare any patient the peril of sanguinous measures.

Gynæcology and Obstetrics.

CRANIOTOMY ON THE DEAD CHILD.*

BY JOSEPH B. DE LEE, M.D., CHICAGO.

I HAVE little doubt that the subject chosen for this paper has excited wonder. Yet that it is one of great importance I believe I will be able to show, and it is one that is seldom, if ever, found in our literature.

We read many wordy articles in the journals on "Craniotomy on the Living Child: Is it Justifiable?" etc. It is the intention of this paper to leave this subject entirely alone. It has been discussed and written upon *ad nauseam*, and can never be settled as long as religious views and sentimentality are allowed to cloud the horizon of scientific reasoning.

Happily in the consideration of craniotomy—or more broadly embryotomy—on the dead child we avoid all these difficulties, for who should have any sentimental regard for a dead fœtus, and what religious discriminations reach it? Nevertheless, there exists in the minds of many medical men an abhorrence of this operation, even when performed on a lifeless fœtus, and this has made many mothers permanent invalids, or even cost their lives.

The basis of this abhorrence is partly sentiment, partly an erroneous impression of the dangers and difficulties of the operation. There are many cases where, the fœtus being dead, the method of delivery that is quickest and least harmful to the mother is by mutilation of the fœtal body and extraction after reduction in size. In these cases the forced delivery of the fœtus unreduced may, and does too often, cause irreparable injury to the mother, and what is gained in the end? Only a dead child!

The object of this paper is to show that the operation of craniotomy and other mutilating operations on the fœtus are simple in performance, requiring little more skill than does the use of ordinary forceps, and are attended with a necessary mortality of zero. Further, that the bad results of the operations that are collated and published are due to the conditions which indicate the interference, or to errors of art, and should not be attributed to the operation

* Read before the forty-sixth annual meeting of the Illinois State Medical Society.

Finally, craniotomy on the dead child should be performed in many cases in preference to the difficult operations which are usually carried out when the fœtus is alive, the principal being, after the fœtus dies endeavor to deliver the mother with the least possible injury and danger.

Craniotomy is considered as a last resort, and the woman is subjected to the most dangerous operations in order to avoid mutilating her dead infant. The mortality of craniotomy is considered higher than almost any other operation, by some even higher than Cæsarean section or symphyseotomy. This is absurd; the mortality of the operation of craniotomy is lower than that of forceps.

Of all obstetric operations the most common is that of the forceps. Frequently the operator finds that, notwithstanding most strenuous efforts, he can produce no effect on the progress of the child; this is usually due to a mistake in the diagnosis of the position of the head, or to the failure to recognize the existence of a contracted pelvis. However, the attempts at delivery are continued, another physician helps to pull, and together they succeed in delivering a dead child, or one so crushed that it dies in a few hours. As for the mother, she has severe cervical, vaginal and vulvar tears, post-partum hæmorrhage, and sepsis, in the puerperium. If happily she escapes with her life, she carries the effects of such brutality in the shape of severe cellulitic thickenings in the parametria, adherent uterus, and probably life-long invalidism. I have known a physician to pull four hours on the forceps, knowing all the time that the fœtus was dead.

The second operation that is too often undertaken to avoid the necessity of hurting the dead child, is version. In cases of contracted pelvis where in spite of strong pains the head has not passed the inlet, if the child is dead craniotomy is the proper operation. I exclude here cases of absolute contraction, referring to those where the conjugata vera is from three to three and a half inches: to do a version here is foolhardy. The operation of version is one that, except in the most favorable cases, requires considerable skill in technique; it has always the attendant danger of rupture of the uterus, especially in cases where the lower uterine segment has become thinned during the ineffectual attempts of the uterus to force the head past the obstruction. Finally, the operation of craniotomy is simple and requires less skill than a version; it has no attendant dangers except sepsis and injury to the soft parts, which the operator can avoid.

Another condition where the simple operation should be chosen is neglected transverse, or shoulder, presentation. In these cases the child is wedged into the pelvis; the fundus of the uterus has drawn high up over it and left the fœtus in the dilated and thinned lower uterine segment. Even the passage of the hand alongside the body of the child may precipitate the rupture which is threatening. Embryotomy should be done: under no circumstances a version, because the child is almost always dead or dying, and turning the child will almost certainly rupture the uterus.

Of course in cases of transverse presentation where one is called early, the child being alive, version is the proper operation. Even if the child is dead, if the bag of waters has only recently broken and the uterus presents none of the symptoms of threatened rupture, a version may be quite easy, and in comparison with decapitation may seem the better operation. Again, one may not have the necessary instruments at hand: but where the labor has been neglected, in cases of contracted pelvis, and where an attempted version meets with even moderate resistance, reject the operation and do an embryotomy.

It may happen that during an extraction by the breech the head becomes arrested at the inlet. During the long, ineffectual attempts at delivery the child dies. Now what is to be done? Keep up the traction, tear the body from the head, rupture the cervix and perinæum? No, the operation of election is craniotomy. In the absence of a perforator use a pair of scissors.

The following cases will serve to show that the conditions I have described exist. I will have to report them without the names of the patients or the physicians, since the latter are still living.

Case 1. Primipara, aged twenty-two: labor eighteen hours; face presentation, mento-dextro-anterior, head not fully engaged, cervic effaced and os dilated for several hours: child dead: forceps, powerful traction, no progress: council; counsellor advised forceps; doctor in charge, craniotomy. Counsellor with feet braced against the bed, two assistants holding the woman by the arms, after the hardest labor delivered a large dead fœtus; profuse hæmorrhage; deep perineal tear. During the puerperium the entire vagina sloughed out. Slow recovery. Place where vagina should be filled with connective tissue, leaving an orifice so small that the finger could not pass. Later, plastic operation in which flaps were made from the skin of the buttocks, the scar

tissue dissected out and a vagina two inches long constructed: result fair.

Case 2. Multipara: contracted pelvis; breech presentation. Midwife called assistance because the head would not come. One physician pulled on the body till he became tired; a second succeeded in tearing the body off the head, which was retained *in utero*. There was nothing to catch hold of but the jaw: a third physician succeeded in ripping this out. Still the head would not come! The fourth physician finally, by pushing his fingers into the orbits, was able to deliver the remainder of the head.* The poor woman died in three hours.

Case 3. Primipara: normal pelvis: large child: head movable about the inlet. Forceps; long and powerful efforts, but no progress; child died during these tractions. An attempt at version succeeded only in bringing down a foot beside the head. Operator, now exhausted, gave place to another, who with great force completed the version. In the extraction which followed, the perinæum was torn through the anus, a tear extending four inches up the recto-vaginal septum. Primary suture sloughed; now permanent incontinence of fæces. Craniotomy was not done because it was thought too dangerous.

Case 4. Reported in a New York obstetrical society last year: case of occipito-posterior position, head still movable: placenta prævia marginalis; prolapse of the arm and the cord. Truly a complicated case, but the *child was dead*.

The following operations were done to deliver this lifeless foreign body: 1. Forceps used to try to correct the bad position of the head. 2. Forceps as an instrument of extraction, using all possible power and kept up for a long time. 3. Incision in the cervix. Think of it, in a case of placenta prævia! 4. Forceps again after this: failure. 5. Version, during which the back turned to the mother's back, making the bringing down of the arms very difficult. 6. Forceps on the after-coming head. The woman died in forty hours.

It is encouraging to note that the paper was very sharply criticised and the proper treatment advanced, at the time it was read. If the child was alive at the time of the first examination, the proper operation was version: this was indicated by all the conditions, placenta prævia, posterior occiput, prolapse of the hand and cord: but the child being dead, the cervix only large enough to

* Cocq: *Arch. de Tocol. et Gyn.*, 1894, No. 5.

admit the forceps, and in the presence of an indication for the termination of labor, there was only one operation to do—craniotomy. Can there be any doubt that, if this operation had been performed, the woman would have lived? It is easier and less harmful than any single one of the methods employed to deliver this case.

In cases where labor has become so complicated that the operation is imperatively demanded, especially where violent attempts at delivery have been made, a certain number of deaths must occur, but these cannot be laid at the door of craniotomy. For this reason all statistics regarding this operation are valueless unless the operations preceding it have been considered—*i.e.*, whether the craniotomy has been undertaken as a primary operation or only as a last resource.

Why should there be any mortality from craniotomy if it is properly carried out? The operation can always be done slowly; there is plenty of time to prepare everything according to the most stringent rules of asepsis. The perforation of the head under the guidance of the fingers is done with absolutely no injury to the mother, and the subsequent application of the cranioclast is simpler and easier even than the forceps. Care is required in the extraction of the child to protect the soft parts from splinters of bone. If the cervix is not dilated, gentle traction repeated often—for there is no hurry—dilates it evenly and safely. Absolute cleanliness protects the patient from infection. In the last year I have had occasion to do five craniotomies—three for contracted pelvis—in the hovels of poor people. Recovery in each case was prompt.

The operation is simple and the instruments needed are two, a perforator and a cranioclast. (The instruments here referred to are Vaefele's perforator and Carl Braun's cranioclast; they were demonstrated at the reading of the paper.) This is nothing more than a large and powerful bone-forceps.

While the instruments are boiling the field of operation is sterilized, abdomen and vulva washed with soap and water, then with 1-2000 bichloride. The vagina and cervix are now thoroughly douched with three per cent. carbolic or one per cent. lysol solution.

The cervix should be large enough to admit three fingers, but the larger it is the better, and in the absence of a contraindication one may wait for sufficient dilatation. The four fingers of one hand are now passed into the vagina and rest on the head: the perforator

is passed under the cover of these fingers and does not touch the maternal tissues at all. The head being steadied from the outside, with a gentle boring motion the point goes easily through the head; the handles are now unlocked and the blades opened to their full extent; the instrument is locked, turned one-quarter of a circle, and reopened; now the handles are again locked and the perforator is carefully withdrawn. Brain matter now flows out, and if the pains be strong they may force the head into the pelvis. It is not advisable to leave the case to nature; rather extract, as it is so simple. With the same precautions as in forceps, the blades of the cranioclast are passed, the solid one inside the opening which was made, the other one over the face; they are locked and screwed together by the screw; now the head is extracted just the same as if it were in the grasp of the forceps, using the same rules to pull with a pain and to pull in the axis of the pelvis.

After labor a thorough vaginal douche or an intra-uterine antiseptic douche is given.

In conclusion I wish to mention the following indications for craniotomy:

1. All cases where, the child being dead, an indication for the termination of labor arises; this operation should be done instead of the forceps when the maternal soft parts are unprepared for rapid delivery. Such cases are eclampsia, placenta prævia, premature detachment of the normally implanted placenta, prolapse of the cord, with danger to the mother from any cause; in short, do not apply the forceps on a dead child. The only exception I would make to this rule is the case of a multipara, with the head low down and the soft parts well prepared.

2. Cases of contracted pelvis when the conjugata vera is not smaller than two and one-half inches. To do a version, extraction, Cæsarean section,* or to use forceps, is not justifiable when the child is dead.

3. In neglected transverse presentation embryotomy should be done. The thought of version should not be entertained for a moment.

There are two points which I have not mentioned, but which are likely to come up in the discussion: First, would not the family object to the disfiguration of the child? Yes, but would they not prefer this to the mutilation, however slight, of the soft parts of the mother? Is it not better to crush the head of a dead baby than to have even a simple torn perinæum? Second, suppose the death of

* *Centralb. fur Gyn.*, 1896, No. 12.

the child is uncertain? The answer is ready: give the child the benefit of the doubt; but do not subject the mother to the risks of severe operations for the sake of a child that is nearly dead or will die during the operation itself.—*Medicine.* H. T. M

VENTRO-FIXATION OF THE UTERUS.

Dr. E. Fairfax Ross has pointed out a decided though simple improvement in the performance of the operation of ventro-fixation of the uterus. After opening the abdomen, Dr. Fairfax Ross frees the uterus, tubes or ovaries from any adhesions which may exist, and then directs an assistant to pack the vagina high up with absorbent salicylic wool. In cases where no adhesions are present this packing is done before the operation. This simple procedure pushes the fundus well up out of the pelvis and keeps it there, so that the necessity of using forceps which may injure the uterus is done away with, and no pulling upon the organ is required, the left fingers of the operator only being required to steady the uterus while the stitches are introduced. After the operation there is no strain upon the sutures, as the plug of wool is left in situ for two or three days, and only removed for the purpose of douching the vagina, after which the vagina is repacked. The above plan prevents all dragging upon the abdominal wound and inversion of its edges, as is the case when a heaving uterus is ventro-fixed. Dr. Fairfax Ross thinks very highly of the operation in suitable cases. I think this valuable and simple suggestion of Dr. Fairfax Ross might be improved upon by the use of a suitable Hodge or Smith pessary instead of the vaginal packing with the salicylated wool. The pessary would give the same support to the uterus above the pelvis during the operation as the vaginal packing does, and would do away with the necessity of removing the plug and repacking of the vagina for the purpose of douching and keeping the parts clean, as all the measures required to ensure the vagina being kept perfectly clean could be carried out with the pessary in position. In the limited number of cases in which I have performed the above operation the results have been most gratifying, and a suggestion like the one mentioned by Dr. Ross, which does away with some of the inconveniences of the operation, such as the dragging upon the sutures, is most welcome. Since writing the above, I have had an opportunity of using the pessary in the manner I suggest, and have found it answer most admirably.

J. H. L.

Ophthalmology and Otology.

HOLOCAIN.

Gutmann (*Deut. Med. Woch.*) relates his clinical investigations with this new anæsthetic, which is closely allied to phenacetin. He has used it in thirty cases in men, of which thirteen were examples of a foreign body in the eye, two of keratitis, seven of operations on the eye, and in eight cases the eyes were healthy. One minute after the introduction of three to five drops of a 1 per cent. solution there was anæsthesia of the cornea. A passing burning sensation was felt. The foreign bodies were removed without inconvenience, and the galvano-cautery was used in case of corneal ulcer and in a case of keratitis. Tattooing was also performed in two cases of leucoma. In one case it was possible to compare tenotomy of the eye muscles under cocaine and under holocain. Less pain was experienced in the latter instance. The duration of anæsthesia under holocain is from five to fifteen minutes. The cornea remains moist and shining. The ocular tension is not diminished. The pupil remains unaltered and accommodation is unaffected. In a patient aged forty-eight, three drops of a 2 per cent. solution of cocaine were introduced into one eye; anæsthesia appeared in $2\frac{1}{2}$ minutes and lasted $3\frac{1}{4}$ minutes, the pupil dilated and the tension diminished. With three drops of a 1 per cent. solution of holocain introduced into the other eye, anæsthesia appeared after a slight feeling of burning, in one minute, and lasted nine minutes; the pupil was not dilated and there was no alteration in tension. The rapidity of anæsthesia with holocain is an advantage. The dilatation of the pupil under cocaine for the removal of foreign bodies is a disadvantage. The lessened pressure is a drawback in cataract extraction, but useful in operations for glaucoma. The author says that holocain should not be used subcutaneously, as intoxication symptoms were rapidly produced by a small dose in a rabbit. For external use he recommends it as a substitute for cocaine.—*British Medical Journal.* J. M.

Eucaine in Ophthalmology.

Sweet reports in the Philadelphia *Polyclinic* that he has used the new local anæsthetic, eucaine, in upwards of fifty eye cases. A 2 per cent. solution of the hydrochlorate was used, one or two drops

causing perfect insensibility of the cornea and conjunctiva in from two to three minutes, which lasted about ten minutes. While not so toxic as cocaine, its anæsthetic effect is fully as great. The one great advantage of the eucaine is that it does not affect the pupil or accommodation. Severe burning pain follows the instillation in many cases, and the hyperæmia of the conjunctiva lasts about half an hour after the anæsthesia passes off. Unlike cocaine, the solutions of eucaine are very stable, and can, therefore, be easily sterilized, besides producing no desquamation of the superficial corneal epithelium. J. M.

Eye Changes in Diabetes Insipidus.

Hansell, in the Philadelphia *Polyclinic*, reports a case of diabetes insipidus with ocular complications. A man thirty-nine years old passed seventy-nine ounces of urine daily, of healthy specific gravity, and without trace of albumin or sugar. The eye presented the retinal changes of albuminuria in striking degree, the white patches of degeneration, the hæmorrhages, the star-shaped figure—not, as usual, at the fovea, but to the nasal side of the disc—the swelling of the papilla and œdema of the retina. This case is interesting because, while the existence of organic kidney disease and diabetes mellitus is frequently first ascertained by the discovery of the ocular changes, but little value has been laid on examination of the eye in diabetes insipidus. Ophthalmic literature contains but few references to the disease; indeed, both physicians and ophthalmologists seem to hold that the association of polyuria and visual symptoms is either an accidental coincidence, or that they are both consequences of the same cerebral lesion.

J. M.

Cerebellar Abscess.

Walker records (*Brit. Med. Jour.*, March 6th, 1897) a case of recovery, after operation, of cerebellar abscess secondary to suppurative otitis media. There are but ten previous cases of recovery on record. Acland and Ballance have drawn attention to the occasional presence of certain paralytic symptoms which may be of great service in localizing a cerebellar abscess, namely, muscular weakness of the limbs of the same side as the ear disease, affecting chiefly the arm, conjugate deviation of the eyes to the opposite side from weakness of the muscles, which draw the eye to the same side, and increased knee-jerk on the same side as the otorrhœa.

J. M.

Public Health and Hygiene.

PROVINCIAL BOARD OF HEALTH.

THE second quarterly meeting of this Board was convened at Dr. Bryce's office at 10.30 a.m., May 6th. Four sessions were held on that and the following day. Present, Drs. Macdonald (Chairman), Covernton, Cassidy, Kitchen, Vaux and Bryce (Secretary).

A complaint was received from a Mr. Hill, of Carleton Place, to the effect that in a recent diphtheria epidemic Dr. MacFarlane, the local Medical Health Officer, had improperly quarantined the infected houses, and Mr. Hill's son had taken the disease and died. The Board investigated the complaint, and found that it had not been shown that the medical official had in any way neglected his duties.

Dr. Carney, of Windsor, Ont., complained because Dr. Lambert, the Medical Health Officer there, refuses to decide upon suspected cases of contagious diseases which are being treated by other medical men. The Windsor City Council wants to pass a by-law to compel him to do this.

Dr. Bryce presented the report of the Committee on Epidemics. The report said that the last quarter had shown an absence of the more severe types of contagious disease, except scarlatina, which, in Toronto and elsewhere, had been more than usually prevalent. The mortality per cent. of cases had, however, been low, and the same was said of the cases of diphtheria which had occurred. The report indicated that this was true more because of the individual action of the attending physician than because of the activity of the Boards of Health, and pointed out that while Toronto spent $30,000 annually, or fifteen cents per head of population, the townships in the county of York spent on an average less than two cents per head. The report referred especially to the seeming reluctance which was displayed to pay a salary to local health officers. The logical outcome of this state of affairs was to be seen in the case of a ratepayer near Barrie, who was suing for damages for $10,000 for the neglect of the municipality to take proper precautions, by which he lost four children by diphtheria. It was asked if the neglect by a Board of Health to prevent the distribution of milk from a herd which is known to have tuberculized

animals would not be held to be a legal cause of damages, and it was hoped that a decision of the courts would be given upon the matter. The question of the transmission of tuberculosis by animals was taken up, and the report said that a large number of papers bearing upon the subject had been sent out. The report concludes:— "The necessity for individual and united action in dealing with this great question of the wholesomeness of the public food supplies, whether from the health or commercial standpoint, is so great that your Committee feels that the hands of the dial of scientific progress cannot be turned back, and that though they may have been stopped for the moment, it has only been that they shall move forward again with a more steady motion, till the noontide of effective action shall have been reached." The report was adopted.

A report on the "Disinfecting Value of Formaldehyde" was read by Mr. J. J. Mackenzie. Dr. Cassidy followed with a report of the work done by Dr. Bose, of Montpellier, France, in producing disinfection by the dry vapors of formol. See page 209, CANADIAN JOURNAL OF MEDICINE AND SURGERY.

Dr. Charles Sheard, M.H.O. for Toronto, was asked to sit with the Board as a corresponding member, and was asked to join the Board in discussion on the preceding reports. Dr. Sheard then spoke on the subject of disinfectants, and referred to certain difficulties in the practical work of disinfection. These reports were adopted.

On motion of Dr. Covernton, seconded by Dr. Vaux, the following resolution was passed: "That this Board desires to express through Dr. J. J. Cassidy its thanks for the courtesy extended to him by Dr. Bose, of Montpellier, in supplying the fullest information regarding the most recent results of his work on disinfection with formaldehyde; and that the Committee on Epidemics be instructed to take such action as may be found practical to supply means for testing the practical value of this disinfectant."

Dr. Holmes, Medical Health Officer of Goderich, gave an explanation of the recent outbreak of typhoid in that town.

A letter from the Canadian Medical Association, asking that ophthalmia neonatorum be placed on the list of communicable diseases requiring notification, caused some discussion. Finally, on motion of Drs. Cassidy and Kitchen, it was resolved as follows:

"That the Provincial Board of Health recognizes the communicable nature and also the unfortunate results of ophthalmia neonatorum, and urges upon obstetricians the adoption of proper

methods for its prevention, but it does not approve of the opinion that this disease should be added to the list of communicable diseases requiring notification under the Public Health Act."

Dr. Bryce reported that the Board's action in closing two cemeteries at Cardinal had satisfied the popular feeling there in regard to the matter. He also reported that he had received complaints from Forest and Ailsa Craig about the G.T.R. cattle yards there, which were described as a nuisance. Another cause of complaint was that the cattle annoyed people by bellowing. The Secretary was instructed to investigate the matter and report.

Correspondence was submitted which had passed between the Secretary of the Board and Mr. W. B. McMurrich, Vice-President of the Muskoka Lakes Association, concerning official inspection of summer resorts. Dr. Bryce contended that it was never intended that the Government should pay the whole of the expense of inspection. Mr. McMurrich, on the other hand, wrote that the Muskoka Lakes Association had never understood that it would be expected to pay, but, recognizing the need of inspection, it had sent out circulars to the summer residents and hotel men, and he thought that by this means the amount required, namely, $500, might be forthcoming.

Ald. D. Barrett, of Port Hope, appeared before the Board, and secured permission for that town to dispose of its sewage by an outfall into Smith's Creek. This permission was granted, with the proviso that if at any time a nuisance results, the same shall be remedied under the direction of the Board.

At the afternoon session the report of the Committee on Public Water Supplies was received. The proposal to supply the town of Renfrew by the Bonchere supply, to be taken from above Smith's Creek, was approved, subject to special provisions to prevent contamination.

A communication was received reporting the prevalence of diphtheria in north Peterboro', with complaints as to the inaction of the local health authorities and physicians. The Secretary was instructed to take action in the matter.

The Board then adjourned. J. J. C.

MONTHLY REPORT OF CONTAGIOUS DISEASE IN ONTARIO FOR APRIL, 1897.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

		Total Reported.	Per cent. of Whole Reported.
Total population of Province	2,233,117	1,119,397	50
" Municipalities	745	348	46
" Cities	13	10	77
" Towns and Villages	236	100	42
" Townships	496	238	48

VARIOUS DISEASES REPORTED.

Municipality.	Pop. Reported	Typhoid.		Diphtheria.		Scarlatina.		Tub'rcul'sis	
		Cases.	Rate per 1000 per Annum	Cases	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum
Cities	377,349	2	.06	24	.7	14	.4	65	2.0
Towns and Villages	212,416	3	.1	6	.3	5	.3	16	.9
Townships	529,632	3	.07	14	.3	3	.07	45	1.0
Total Pop. Reported	1,119,397	8	.08	44	.4	22	.2	126	1.3

P. H. B.

Garbage Disposal

Is in New Orleans, as in most other American cities—New York and Brooklyn included—an unsolved, or rather an experimental problem, and is likely to so continue so long as the sanitary authorities allow themselves to be imposed upon by the nuisance-rendering processes, instead of the more effectual, shorter and more economical—to the public health—*destructive* processes. Thus far, none of the garbage-rendering processes that would make money out of the residue without nuisance to the neighborhood, has been successful. It is high time that the sanitary authorities regarded the health and comfort of the people of more importance than the commercial value of the garbage.

Proceedings of Societies.

THE ONTARIO MEDICAL ASSOCIATION.

THE seventeenth meeting of this body was held in the Normal School, Toronto, June 2nd and 3rd, Dr. John Coventry, President, in the chair.

Dr. Wm. Britton presented the report of the Committee on Papers, and Dr. Machell that of the Committee of Arrangements.

Dr. J. L. Davison read a paper on "Serum Therapy." In this he discussed the germ theory of disease and described how the toxins and antitoxins were prepared. He then dealt with the matter of diphtheritic antitoxin, quoting statistics which showed beyond doubt that this new remedy saved at least fifteen per cent. more lives than were saved by the old forms of treatment. Reports showed that the effects of bubonic plague had been successfully treated by serum therapy. The work done in such diseases as tuberculosis, rabies, and small-pox was alluded to.

Dr. T. F. McMahon reported a large number of cases in which he had used the anti-diphtheritic serum with a most happy result in nearly every case.

Drs. Fraser and Shuttleworth also made some remarks as to the success of the old method of treatment still pursued at the Toronto Isolation Hospital.

Hon. G. W. Ross was then introduced, and spoke a few words of welcome to the Association.

Dr. J. T. Fotheringham read a paper on "Remarks on Modern Therapeutics."

A letter was read from Dr. Wesley Mills, who had been appointed as a delegate from the Canadian Medical Association, regretting his inability to attend.

Wednesday Afternoon.

After the minutes were read, Dr. J. M. Cotton presented the first interim report.

Dr. Coventry then read the presidential address. He discussed the question, "Where has the old-time family physician gone?" He deprecated strongly the practice of lodge and contract work, and made a strong plea in favor of inter-provincial registration.

A vote of thanks was tendered to the President, moved by T. T. S. Harrison and seconded by R. W. Bruce-Smith.

Dr. J. A. Williams then read a paper on "Inertia of the Uterus following Chloroform in Labor." The patient was a large, bony, primiparous female, married late in life, and was delivered with very great difficulty, under chloroform, by forceps, of a fourteen pound baby. The labor was long. Inertia with severe hæmorrhage followed. The use of hypodermic injections of strychnia and ergot, the intra-uterine hot douche and kneading the fundus checked the flooding.

Dr. J. A. Temple said he was not sure that the chloroform was the main factor in the causation of this serious complication. He thought the immense size of the child and the very long labor were the chief causes of the inertia.

The Association then divided into sections, medical and surgical.

Surgical Section.

Dr. L. Teskey reported a case of gangrene of the rectum. The patient, a man about fifty, had what appeared to be an ischio-rectal abscess which opened spontaneously near the anus. A day or two after a large slough of the rectum, six inches long, was evacuated. An inguinal colotomy was done, and the case was progressing favorably.

Dr. G. A. Peters read a paper on "Traumatic Lesions of the Spinal Cord," presenting two specimens.

Dr. T. K. Holmes, of Chatham, read a paper with the title, "Cases of Melancholia Cured by Removal of Interstitial Fibroma of the Cervix Uteri." The first case of melancholia reported was in a young married female. A vaginal examination was not made. Becoming pregnant, she, it was hoped, would be cured. During labor the tumor was found. Craniotomy was performed to make delivery possible. Her mental condition grew worse until the tumor was removed a month later. She got well, but some years later she again became melancholy. On examination another fibroid was found and removed. She did not improve, but the cause was discovered in the finding of another fibroid, the removal of which was followed by prompt improvement. Dr. Holmes reported other cases.

Dr. W. H. Harris reported a case of extensive sloughing following the use of the X rays, and presented a water color of the

same. It was discussed by Drs. B. Spencer, G. A. Peters and H P. H. Galloway.

Dr. A. T. Hobbs, London, read a paper on "A Plea for the Radical Cure of Hernia Among the Insane." This was discussed by Drs. E. H. Stafford, T. K. Holmes and J. Wishart.

Dr. A. Primrose presented a paper on the aseptic treatment of pus cavities. This was discussed by Drs. Galloway, Sylvester, Wishart, Goldsmith, Starr and Holmes.

Medical Section.

Dr. J. Mitchell, Enniskillen, was elected Chairman, and Dr. J. W. Smuck, Secretary.

Dr. W. J. Wilson read a paper on "The Treatment of Eclampsia." If indications were severe, labor should be induced when the child was not viable. If the child was viable he advised temporizing, and using such remedies as would eliminate the poison from the system.

Dr. Sanson said he had seen cases of eclampsia occur in which there was no disease of the kidneys.

Dr. A. H. Wright thought too much attention had been paid to the kidneys They were only attacked secondarily. The liver was attacked first, then the blood, the nerves and the kidneys. There was nothing better than magnesium sulphate in treating the preceding condition. For the seizure morphia was good in selected cases. Chloral was useful after the convulsions were over to prevent recurrence.

Dr. C. J. Hastings thought a distinction should be made between neurotic and toxæmic cases. Bleeding had been referred to, but he preferred the use of intravenous injections of artificial serum.

Dr. Mitchell said that in country practice there was a difficulty in getting a chance to treat a case until labor had come on. There was, no doubt, some virtue in bleeding.

Dr. J. S. Hart narrated a case of abscess of the lung.

Dr. A. McPhedran read a paper on "Cerebral Syphilis." He reported two cases. Treatment should be thorough and continuous. Prognosis varied with the length of time of incubation. Cases exhibiting local symptoms were more unfavorable than those showing general symptoms. Iodide of potassium should be administered in large doses intermitted with mercury.

"Study of the Dried and Stained Preparations of the Blood."

Dr. Parsons first described the method of preparing and staining the specimens, and then illustrated the variations from normal found in various pathological conditions.

Dr. J. Sanson reported a series of cases in which he was unable to make a satisfactory diagnosis. They had some resemblance to "milk-sickness," but were not caused by milk. He then discussed the relation of appendicitis to idiopathic peritonitis.

Dr. W. J. Wilson said he had seen rheumatic peritonitis. In such cases the joints were tender. They yielded to anti-rheumatic treatment. Drs. Parsons, G. Gordon, H. B. Anderson, J. S. Hart and W. Oldright took part in the discussion.

Wednesday Evening.

After the minutes, the discussion in surgery took place, led by Dr. G. A. Bingham, Toronto: subject, "The Present Status of Radical Cure in Hernia." It was discussed by Drs. J. Wishart, Spencer and Primrose.

The election of the Nominating Committee was then proceeded with. The following gentlemen were elected: Drs. A. H. Wright, J. E. Graham, A. McPhedran, J. L. Bray, A. Primrose, T. T. S. Harrison, R. W. Bruce-Smith, A. A. Macdonald, T. K. Holmes, William Britton and J. Mitchell.

Dr. N. A. Powell gave an address on "The Cottage Sanitarium Treatment of Pulmonary Tuberculosis," showing some lime-light photographs of the Sarnack Lake Sanitarium, and also of the one in Muskoka, now almost completed.

Dr. Rudolph read a paper on "The Effect of Gravity upon the Circulation."

Dr. E. E. King exhibited some stereopticon views of skiagraphic pictures.

Thursday Morning.

The first item of business was the discussion in obstetrics. In the absence of Drs. Garratt and Scadding, Dr. Gilbert Gordon opened this discussion. He was followed by Drs. William Oldright, J. L. Bray, H. P. Wright, T. K. Holmes and E. J. Barrick.

The Association then divided into sections.

In the surgical section, Dr. J. F. W. Ross presented a paper on "Some Peculiar Phases of Appendicitis." He exhibited some photographs of cases. Discussion followed by Drs. T. K. Holmes, A. Mackinnon and H. P. Wright.

ONTARIO MEDICAL ASSOCIATION CLINIC AT TORONTO GENERAL HOSPITAL, JUNE 3rd, 1897.

Dr. H. Meek read a paper on "Cystic Tumors of the Ovary Complicating Pregnancy." Drs. J. F. W. Ross, T. K. Holmes, A. A. Macdonald and H. P. Wright took part in the discussion

Dr. Kitchen was appointed to the chair in the medical section.

The following papers then were presented in order: "Some Considerations on the Management of Pregnancy," by Dr. E E. Harvey, Norwich: "Hydrotherapy of the Skin in Early Phthisis," by Dr. Edward Playter, Ottawa: "The Treatment of Gastro-Intestinal Catarrh in Infants," by Dr. H. D. Livingstone, Rockwood.

Dr. H. B. Anderson then read a paper on "Pneumococcus Infection."

Dr. H. J. Hamilton read a paper on "Hyperchlorhydria."

Dr. Price-Brown read a paper on "Intra-Laryngeal Mycosis."

The Luncheon.

At one o'clock the doctors assembled in the well-lighted, cheerful rooms of the Royal Canadian Yacht Club, where luncheon was partaken of, the members from outside the city being complimentary guests. Luncheon was excellently served, and then came a pleasant toast list, the speaking to which was bright, breezy and brief. Dr. Machell presided, supported on the right and left by veterans in the profession and past officers The vice-chairs were occupied by Drs. Ryerson and Temple. "The Queen" having been enthusiastically honored, Dr. Temple proposed the health of the retiring President, Dr. Coventry, Windsor, who, in reply, said he regarded the honor of presiding over the Association as a very high one indeed. He had had great pleasure in discharging the duties, and if he had succeeded to any appreciable extent the credit was not for him, but for the officers, who had so loyally supported him. He then referred to the visit of the Association last year to Windsor, and said the meeting had left a most excellent impression there, and not only in Windsor, but in Detroit and other places across the border. It had tended to draw together the medical faculties in both countries, and he believed distinguished brethren from the other side would have been present at the meeting here this year were it not that meetings of medical men were being held in their own States. He was gratified with the success of the gathering, but as time was short he would refrain from enlarging on their work, and would sit down, thanking them for their good wishes.

Dr. Ryerson proposed the health of the President-elect, Dr. Britton. In certain circumstances the old cry, "The king is dead, long live the king," was a rather unfeeling one, but in the case of Dr. Britton it was "Long live the king." (Cheers.) In this year of jubilee it was fitting that a Britton should be at the head of the Association—(cheers)—and if his name did not belie him, Dr. Britton would rule to suit his own ideas, for they had it that "Britons never would be slaves." The toast was enthusiastically drunk.

Dr. Britton was singularly happy in his reply, and closed by calling on the members to give hearty co-operation in making the Association's next meeting the best in their experience. (Cheers.)

Dr. Coventry proposed the toast of "The Ex-Presidents," remarking on the sad havoc made in their ranks by death.

Dr. Clark was the first called upon to reply. He was, as usual, witty and to the point, embellishing his remarks by apt anecdote.

Drs. Reeves, Geikie, Grasett, Temple and Bruce-Smith also replied.

The Chairman proposed the health of Dr. Thorburn, President of the Canadian Medical Association.

Dr. Thorburn, in reply, spoke of the great medical gathering to be held in August, at Montreal, and said the question of the inter-provincial standing of doctors would be discussed. He hoped progress would be made with that important question, for the time had come when they ought to have a common standard for Canada. (Cheers.)

Dr. Macdonald proposed the "Visiting Guests," and Dr. Sanson, Windsor, replied in a speech full of humor. His colleague from Windsor was the President, and as it was the habit of Presidents of the Association to die soon after bearing the weight of honor bestowed upon them, he thought it best for the safety of Dr. Coventry that he should accompany him to the meeting. (Cheers.) About one-half of the ex-Presidents were dead, and, continued Dr. Sanson, glancing mischievously at the bulky form of Dr. Daniel Clark, an ex-President, a large portion of the remaining half is at the asylum. (Loud laughter.) But not having had notice, he must not attempt a speech. He differed from his friend, Dr. Clark, in that respect. He (Dr. Sanson) practised in a place where great deliberation and thought were required before speaking, but Dr. Clark's sphere was in a place where a man was quite ready at a moment's notice to make speeches on every conceivable subject.

(Laughter.) Seriously, the medical profession had a great career before it in Canada, and there was no reason why the doctors before him should not advance boldly in the march of medical research and discovery, and share the honors in the work for mankind with the brethren anywhere in the wide world. (Cheers.) He paid a high tribute to Lord Lister, who will visit Canada to attend the meeting of the British Association in Toronto, in August.

Dr. Harrison also replied.

To the toast of "The Faculty in the City," proposed by Dr. Mitchell, Drs. Powell and Gibb Wishart replied.

The Association was then treated to a cruise around the island in Mr. Gooderham's steam yacht, following which the members were transported by private cars (through the kindness of the Toronto Railway Company) to the Toronto General Hospital, where a clinic was given.

Dr. J. E. Graham showed a case of Hodgkin's disease.

Dr. O'Reilly presented a number of ingenious and cheap surgical appliances made in the institution.

Dr. I. H. Cameron showed a case of gastric carcinoma, in which gastro-enterostomy was done ten weeks previous.

Dr. G. Peters showed a case of articular disease of the right knee-joint.

Dr. A. Primrose showed a case of skin-grafting of the hand.

Dr. A. McPhedran showed a case of gangrenous pneumonia, in which operation and drainage had been made through the left axilla.

Dr. L. Teskey showed a case of suprahepatic abscess.

Thursday Evening.

At the evening session the election of officers resulted as follows: Dr. William Britton, of Toronto, President; Dr. Sanson, of Windsor, First Vice-President; Dr. H. P. Wright, of Ottawa, Second Vice-President; Dr. John Wishart, of London, Third Vice-President; Dr. J. Mitchell, of Enniskillen, Fourth Vice-President; Dr. J. N. E. Brown, of Toronto, General Secretary, and Dr. G. H. Carveth, of Toronto, Treasurer.

The newly-elected President said he appreciated highly the honor conferred upon him. The end and aim of the Association was that it might grow until it embraced the medical profession of

the whole country. This could only be done by each member of the Association doing his best to bring one or more new members into its ranks.

Quack Medicines.

Dr. Barrack presented the report of the Committee on Legislation. While noting with pleasure the advance made in legislation in Ontario, in regard to the health of the public, they begged to impress on the Association the advisability of bringing to the attention of the Government two matters: (1) The appointment of a committee to supervise, in some way, the various quack and other advertisements in the public press, appealing to and deluding the sick and afflicted; (2) In rural districts to have one medical health officer for the county instead of one for each municipality. The report was adopted after some discussion.

Victorian Order of Nurses.

One of the members drew attention to the proposal to found an order to be called the Victorian Order of Nurses. He thought the scheme crude and impracticable, and one that would do untold harm to the Canadian public. The result of half-trained nurses—and he contended they would be only half-trained—going into the sparsely settled districts to look after the sick would be an increase in the death-rate. The high death-rate in England was, according to the best authorities, due in no small degree to the large number of midwives in that country. The matter was one which ought to be seriously considered by the Association, all the members of which had the health of the public in view. He moved, "That in the opinion of the Ontario Medical Association the proposal to found a Victorian Order of Nurses is an unnecessary and impracticable scheme."

Objectionable Features.

The seconder of the motion said that while he had the utmost respect for many of the schemes and works which Her Excellency the Countess of Aberdeen was engaged in, he did not agree with this movement. The pamphlet issued from the office of the Governor-General at Ottawa in regard to the order contained some objectionable features. One of these was a statement in effect that Canada needed more Dr. MacLures, men who were not in the

profession for the sake of the fees alone. That sort of attack on the profession was certainly irritating. The medical men of Canada never refused to do all in their power for sufferers, even when they knew that their patients were too poor to pay fees. Continuing, he dealt with some of the objects of the order as stated in the pamphlet. One of these was to attend the sick poor of the city in their homes, the same work exactly, said the doctor, that was being carried on so successfully by the Nursing at Home Mission of Toronto, and like organizations in other cities.

A rural doctor said that in twenty-five years' experience as a country practitioner, he had never met a case in which a doctor had refused to attend a patient, no matter how poor the latter might be.

A Toronto medical man said that since the organization several changes had been made in its constitution, the most important of which was that the nurses should pass a specified examination by a committee of medical men.

Strong Disapproval.

Others thought that the resolution should state the reasons on which the Association based its objections to the scheme.

The President therefore appointed a small committee to draft such a resolution.

The resolution brought in and adapted, was as follows: "After careful consideration of the scheme for the founding of a Victorian Order of Nurses, so far as its details have been made public, the Ontario Medical Association desires to express its full appreciation of the kindly motives that have prompted the movement, but feels that it would be neglecting a serious public duty if it failed to express its most unqualified disapproval of the scheme, on account of the dangers which must necessarily follow to the public should such an order be established."

A resolution of thanks was passed to Hon. G. W. Ross for allowing the Association the use of the Normal School. Mr. Ross, who was present, made a suitable reply. Resolutions of thanks were also passed to Dr. O'Reilly, the R.C.Y.C., Mr. Gooderham, the T.S.R., the C.P.R. and G.T.R., for courtesies extended, and to Dr. J. Coventry, of Windsor, the retiring President, for his services during the past year.

The meeting then adjourned.

The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

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Editorials.

SMOKERS' CANCER.

THOUGH the existence of this disease has been denied by contemporary surgeons, or, at least, has not been deemed worthy of much notice by modern writers, Dr. Cortyl, who has observed a good many cases in the northern districts of France, states, in a recent paper, which is summarized in *La Presse Medicale* of April 21st, that it occurs pretty frequently.

According to this author, Bouisson indicated tobacco as the cause of cancer of the lips and nasal fossæ, and Guermonprez has

insisted on the causative influence of the use of the pipe, in producing neoplasms of the tongue and tonsils.

Smokers' cancer, wherever found, is almost always a lobulated epithelioma, sometimes composed of mucous and at other times of horny tissue. It extends by continuity or reaches the glands by the lymphatic route.

As in all other cancers, its etiology is unknown. The predisposing cause of buccal cancer depends on a general diathesis, the herpetism of Gigot-Suard, rather than on heredity, the importance of which, in such cases, is founded on a very limited number of observations. The determining cause is very frequently the repeated irritation of tobacco, acting on the same spot in the mucous membrane. Cancer of the mouth shows itself particularly among smokers who pay no attention to the cleaning of the mouth, who smoke short clay pipes to the bottom, and who use tobacco of inferior quality.

These neoplasms attack particularly the under lip or that part of the tongue which is regularly brought into contact with the overheated stem of the pipe and is stained with a kind of tobacco juice or rather an acrid, irritating empyreumatic matter. They also grow at the base of the tongue and on the tonsils of smokers, who, having lost their teeth, hold the stem of the pipe deep in the mouth, between the tongue and the soft palate. The weight of a pipe, which is allowed to press steadily on the same spot, as can be shown by the characteristic wearing down of the teeth on one side, is itself a source of irritation of the lip and explains the localization of the disease. In all cases the cancer is found on that side of the mouth on which the smoker is accustomed to hold his pipe.

The propagation of cancer by contagion, which has been much discussed of late, would not appear to be impossible in the matter of tumors of the mouth. If a smoker, predisposed by the herpetic diathesis, debilitated by alcohol or labor, uses a pipe belonging to a man affected with cancroid of the lip, or drinks in a public house from a glass not properly cleaned, often notched at the rim and perhaps infected by a person who has just used it, it would not be surprising if he contracted this disease by contagion.

When these cancroids are situated on the lip and are submitted to an early operation the prognosis is relatively favorable; but quite the reverse when they attack the tongue or the tonsil. The disease recurs more rapidly and more frequently when the smoker does not give up the use of tobacco for good.

Treatment by the injection of chemical or organic liquids has, so far, not yielded a satisfactory result: the mental effects resulting from this treatment will, however, induce practitioners to use, in cases which are not suitable for a cutting operation, interstitial injections of alcohol, which are less dangerous and painful than any other agents of this class. The employment of caustics ought to be abandoned in such cases, as it takes a long time, is subject to contingencies, and is always very painful.

Surgical treatment is the only method which can be recommended. The surgeon should perform an early operation, cutting well outside the diseased tissues and removing everything which provokes suspicion, or else should not operate at all.

When an operation has been performed, the use of a retention catheter, introduced through the nostrils, tends to ward off an attack of pneumonia, which often complicates surgical procedures done on the anterior portion of the digestive tract.

Smokers, predisposed by heredity or herpetism, ought to be careful to secure a clean condition of the mouth. They should also use a nargile or a wooden or meerschaum pipe with an amber mouthpiece; they should not smoke a pipe down to the bottom, and should avoid acrid tobacco. If in addition to these personal precautions preventive measures were put into operation, such as the supervision of the rinsing of glasses in hotels and saloons, we might expect to see a gradual reduction in the frequency of smokers' cancer. J. J. C.

THE NEW TUBERCULIN.

Dr. Robert Koch, of the Berlin Institute for Infectious Diseases, has sent a communication to the *Deutsche Med. Wochenscr*, of April 1st, 1897, announcing his discovery of a new tuberculin. He also explains in full the method by which this agent is prepared. In view of the dangers connected with its preparation, he has it made wholesale by a German firm of manufacturing chemists, Meister, Lucius & Bruning, Hochst. The new preparation is preserved in glycerine.*

From a summary of the letter, which appears in *La Presse Medicale* of April 7th, we learn that experiments on animals have

* Merck & Co., New York, inform the writer that the price of Koch's Tuberculin R. is $3.00 per 1 c.c. vial.

convinced Dr. Koch that the new tuberculin has immunizing properties and curative powers as well, if the treatment is begun in good time. In contradistinction to "Tuberculin A," "Tuberculin R" does not excite any local or general reaction when used in suitable doses. It is administered subcutaneously. Referring to its curative powers, Koch says that, when treatment is begun in good time, favorable results are manifested in two or three weeks.

The initial dose is one five-hundredths of a milligramme. The preparation furnished at present contains ten milligrammes of tuberculin in each cubic centimetre. In preparing the initial dose, therefore, it must be diluted with a sufficient quantity of a sterilized physiological solution of common salt.

In case any reaction should appear, the initial dose is lessened. Injections ought to be made every second day and the dose increased slowly, so as not to produce more than one degree F. of elevation of temperature. Should the temperature rise, the operator ought to wait till it reaches the normal line, before making a new injection. One may thus be able to introduce a dose of twenty milligrammes; and, if this dose does not cause pyrexia, the operator should stop the treatment or else make some more injections, at long intervals. The curative effect is often obtained when 5 or 10 milligrammes have been injected.

This treatment succeeds only when the tubercular disease is not of long standing or is not complicated with secondary streptococcus infection. It has no influence over the latter. In order to recognize the presence of streptococcus infection, it is simply necessary to observe the temperature in a given case. Tubercular patients whose temperature exceeds 100.4 F. rarely derive benefit from specific treatment. Koch has tried his new tuberculin on a large number of tubercular patients, chiefly cases of lupus. The treatment has succeeded, without an exception, and has caused considerable ameliorations, which were often real cures; but he prefers to wait longer before speaking of cures.

In patients with cutaneous tuberculosis, as well as those who have pulmonary consumption, the new tuberculin does not excite the least local reaction. In the pulmonary cases, there has been, in some instances, an increase in the moist rales, but, in a short time, expectoration becomes less and less abundant, the rales are not heard, the dulness on percussion diminishes and the bacilli disappear from the sputa. From the beginning of the treatment, the patient increases in weight and the fever declines, the marked

difference between the morning and the evening temperatures is no longer noted, and after a certain time the temperature becomes normal.

Dr. Koch thinks he has extracted all that could be taken from tubercular cultures, so that any improvement in his new tuberculin does not seem possible to him. At present he is studying the action on tuberculosis of the serum of animals which have been treated with his new tuberculin.

It is quite likely that this new agent will receive a thorough trial at the hands of the medical profession, as the wide distribution of tuberculosis in every country and the unspecific nature of the remedies ordinarily used in its treatment, make the practitioner look anxiously afield for a remedy which really possesses curative properties in this disease.

As it requires accurate clinical observation and is not dependent for its operation on hygienic or climatic influences, the new treatment will be placed entirely in the hands of physicians. The thoughtless enthusiasm excited by the tuberculin discovery of 1890 need not be anticipated in the case of the new agent. Its discoverer modestly concedes its limitations. It is not to be expected, even though it combines antitoxic and antibacterial powers, that the new tuberculin can overcome the ravages of a tubercular disease which has been several years in existence. The necessity of beginning treatment at an early date and of searching for the presence of streptococcus infection by the regular use of the thermometer, should induce practitioners to scrutinize their cases of suspected tuberculosis. An early diagnosis and a careful sifting of cases may enable them to obtain a larger percentage of curative results. J. J. C.

"THE ABUSE OF MEDICAL CHARITY."

THE Medical Society of the County of New York held the most exciting session in its history on the evening of May 24th in the Academy of Medicine in that city.

The excitement was due, first, to a spirited attack by Dr. D. B. St. John Roosa upon the bill fathered by members of the medical profession, and passed at Albany, which was designed to do away with some free dispensaries and prevent the formation of others. Incidentally, it was hoped that the law would bring back to private

practitioners many persons who, apparently well to do, have been securing free treatment at hospitals and dispensaries, by compelling them to submit to a rigid investigation of their financial resources before being accepted as patients at these institutions. Dr. Roosa held that the bill was born of the hard times that have affected business, professions and trades, and that when prosperity came again those who were instrumental in forwarding the bill would regret it. Moreover, he objected strenuously to giving to the State Board of Charities the rights conferred by the bill, to revoke the charters of institutions that violate the law, holding that the judiciary alone should have the power to interfere with vested interests.

When he sat down his position was vigorously assailed by some of his colleagues, and the excitement reached a culminating point when the news was announced that Governor Black had allowed the bill to die.

Dr. Landon Carter Gray, President of the Society, was in the chair. After some routine business had been disposed of the report of the Committee on Abuses of Medical Charity was called for. Dr. James Hawley Burtenshaw, chairman of the committee, read the report, which was as follows:

At the first meeting of this committee two steps were decided upon—first, to ascertain the sentiment of the Governing Boards of the different dispensaries regarding the proposed efforts to check indiscriminate dispensing of medical aid, and, second, to communicate with the Charity Organization Society of the city of New York with the object of ascertaining if a system might be devised whereby the worthiness of applicants for dispensary treatment might be investigated and reported and if its co-operation might be relied upon to this end.

As a result of the last named resolution the fact was made known that the Charity Organization Society would willingly co-operate with this Society along the lines proposed.

In order to determine to what extent the co-operation of the dispensaries might be relied upon a letter was sent on February 13th last to the President, Secretary or physician in charge of each of the ninety-five dispensaries located in New York city, asking if the Governing Board of the Dispensary approved of the movement to abolish or regulate the abuse of medical charity, and whether their support could be expected. To almost every letter an affirmative answer was received.

The meeting was decidedly stormy, the discussion being taken active part in by Dr. D. B. St. John Roosa, Dr. Burtenshaw and Dr. E. H. Grandin. During the meeting statements of a somewhat diverse character were made: Dr. Roosa on the one hand stating that the talk about the abuses made of medical charity was very much exaggerated. He said that he represented institutions which had certain vested constitutional rights, and he added that he did not propose to allow those vested rights to be taken away. He said that many of the complaints from physicians of their patients leaving them and going to free dispensaries was due to the hard times which have been so prevalent. Dr. Grandin, on the other hand, said emphatically that the dispensary abuse was one of the greatest evils a physician had to contend against. He went as far as to say that Dr. Roosa was in favor of a system WHICH HELPED TO DEFRAUD THE MEDICAL PROFESSION. He insisted that the matter should be stigmatized as it deserved, and concluded by saying that no one should hesitate to oppose the evil even though their efforts thus far to obtain the desired legislation had been fruitless.

We heartily congratulate our confreres in the profession in New York on the firm stand taken in regard to the dispensary evil. The sooner they insist upon the Governor of the State passing such legislation as will prevent the monied classes from securing free treatment at the many existing charitable institutions, thereby taking dollar for dollar out of the pockets of the practising physicians who can ill afford the loss, the better for the profession in every way. We hope that the profession of Toronto will take similar action in this respect. W. A. Y.

THE VICTORIAN ORDER OF HOME HELPERS.

AMONG the topics discussed at the closing session of the Ontario Medical Association, at the Normal School recently, was the proposed Victorian Order of Nurses. The discussion was decidedly animated. Among those taking part were the President-elect, Dr. W. Britton, Toronto; the retiring President, Dr. Coventry, of Windsor; Drs. Fotheringham, Machell and others. The members spoke strongly against the scheme, fearing that, owing to the want of proper training, these nurses scattered broadcast over the land would tend to materially increase the death-rate. One physician stated that the high death-rate in maternity cases in England was

due in no small degree to the large number of midwives employed in that country. The motion before the Association was as follows: "That in the opinion of the Ontario Medical Association the proposal to found a Victorian Order of Nurses is an unnecessary and impracticable scheme." As others thought that the resolution should state the reasons upon which the Association based its objections, the following was unanimously carried:

"After careful consideration of the scheme for the founding of a Victorian Order of Nurses, so far as its details have been made public, the Ontario Medical Association feels that it would be neglecting a serious public duty if it failed to express its most unqualified disapproval of the scheme, on account of the dangers which must necessarily follow to the public should such an order be established."

Several members spoke about a very objectionable sentence which appeared in the official pamphlet issued from the office of the Governor-General at Ottawa, namely, "That Canada needed more Dr. MacLures—men who were not in the profession for the sake of the fees alone." In referring to this remark, several physicians stated (what all Canadians know to be true) that never had a case been known in which a doctor had *refused* to attend a patient, no matter how poor the latter might be. We are glad that the members of our profession are speaking out on this subject, for this slurring remark should not be passed over. We cannot deem this an instance where dignified silence is golden; we must rather speak in clarion notes. While, on the one hand, we maintain that every physician should uphold the dignity of his calling, and that those who employ him should gladly give him a well-earned fee; on the other hand, we do not believe there is in all Canada a physician who would not gladly and instantly respond to the call of suffering poverty. Every "Drumtochty" in Canada has its "Dr. MacLure," although, we fear, unhonored and unsung; he lives and voices in his unselfish life his noble creed:

> "Oh, brother man! fold to thy heart thy brother;
> Where pity dwells, the peace of God is there;
> To worship rightly is to love each other,
> Each smile a hymn, each kindly deed a prayer."

We took the trouble, before referring editorially to the proposed Order of Nurses in our May issue, to ascertain the opinion of a number of physicians in the Canadian cities, towns, and some

country places, and we found the almost universal verdict to be that "The Victorian Order of Nurses" was not really needed.

The city of Winnipeg has spoken with no "uncertain sound," the Medical Society of that city having lately passed the following resolution:

"This meeting, representing the Medical Society of this city, is unanimously of opinion that, though the object that Lady Aberdeen has in view in establishing the Victorian Order of Nurses is highly commendable, with our necessarily more perfect knowledge of the requirements of the country in attending the sick, we feel that the scheme, at any rate so far as Manitoba and the North-West is concerned, will prove an entire failure."

When "a nation speaks to a nation," it certainly seems but courteous that the symbol of the greeting should be expressive of the unanimous feeling of the people. Therefore the proposed "Victorian Order of Nurses" would not voice fittingly the Jubilee message from "Our Lady of the Snows."

W. A. Y.

RECENT ADDITIONS TO TORONTO UNIVERSITY MEDICAL FACULTY.

It is understood that, though there were threatened recently some radical changes in the staff of Toronto University Medical Faculty, the proposed changes have not materialized, but instead several additions have been made to the personnel of the staff and the same sent on to the Ontario Cabinet for approval.

In the department of surgery Dr. L M. Sweetnam and Dr. H. A. Bruce have been made associate professors in place of the late Drs. W. T. Aikins and L. MacFarlane. Dr. J. F. W. Ross will be professor in gynæcology in conjunction with Dr. Uzziel Ogden.

Professor Heebner, Dean of the College of Pharmacy, was formerly a lecturer in the University, and will in future be an associate professor of the Medical School.

Other appointments are those of Drs. W. B. Thistle and H. T. Machell as lecturers in the diseases of children and clinical medicine. Dr. Thistle was formerly demonstrator in anatomy. Dr. G. Boyd and Dr. Robert J. Dwyer, of St. Michael's Hospital, will be lecturers in medicine.

The Medical Faculty has so far had a very much up-hill road to pull, and there is no denying the fact that had it been placed in

the position of a business house it would have long ere this been declared in a state of bankruptcy. We understand that it was only recently that Drs. John Ferguson, W. W. Ogden and Moses Aikins received, after nearly six years' delay, the first dividend of 25 cents on the dollar on their retiring allowances, something they have been sighing for ever since it became justly due. The JOURNAL earnestly hopes that with the new blood now infused into it, the Medical Faculty will at once enter upon a career of success and increased usefulness.

JUBILEE MEETING OF AMERICAN MEDICAL ASSOCIATION.

WE exceedingly regret that owing to lack of space this month we will be unable to even mention in anything like a satisfactory manner the meeting of the American Medical Association, which held its fiftieth anniversary last week in Philadelphia. This magnificent Association, which is without a peer, we think, almost in the world, had by far its most successful convention this year, there being over 2,500 delegates from every State in the Union. Philadelphia threw open its doors to the visitors, and from the reports sent us by our representative, the opening meeting of the convention must have been well worthy of travelling a long distance in order to be present. Not only was President McKinley there, but also Governor Hastings and Mayor Warwick, accompanied by all the most prominent physicians of the United States, including Professors Nicholas Senn and Hobart A. Hare The address in medicine was delivered by Dr. Austin Flint. After considerable rivalry, Denver, Col., was chosen as the next place of meeting, and Dr. Geo. M. Sternberg, of the District of Columbia, was elected President. We hope to give a report of this wonderful meeting in our next issue. W. A. Y.

THE NEW CUSTOMS TARIFF.

To Canadian physicians some features of the new tariff will occasion a pleasant surprise. The following classes of books have been placed on the free list: Books for the library of any incorporated medical association: books which are not printed in Canada, which are on the curricula of universities and colleges, whether for the use of students or others, and books printed by, or for any Government, or by any association for the promotion of science or

letters. As books on applied science are on the free list, the customs authorities at Toronto are allowing the free entry of all books on medicine and surgery. Besides, American reprints of English works, not copyrighted in Canada, may now be imported.

Surgical instruments will be put on the free list on the first of January, 1898. Up to that date they will have to pay only 10 per cent. duty. J. J. C.

GOOD ADVICE.

We are wondering whether the Editor of our esteemed contemporary, *The Canadian Medical Review*, will feel hurt if we mention in passing that possibly the following verses might be quoted with some little benefit to the gentlemen who have recently been filling his journal with such a voluminous amount of correspondence on Council matters:

If you've got a thought that's happy,
Boil it down;
Make it short and crisp and snappy,—
Boil it down.
When your brain its coin has minted,
Down the page your pen has sprinted,
If you want your effort printed,
Boil it down.

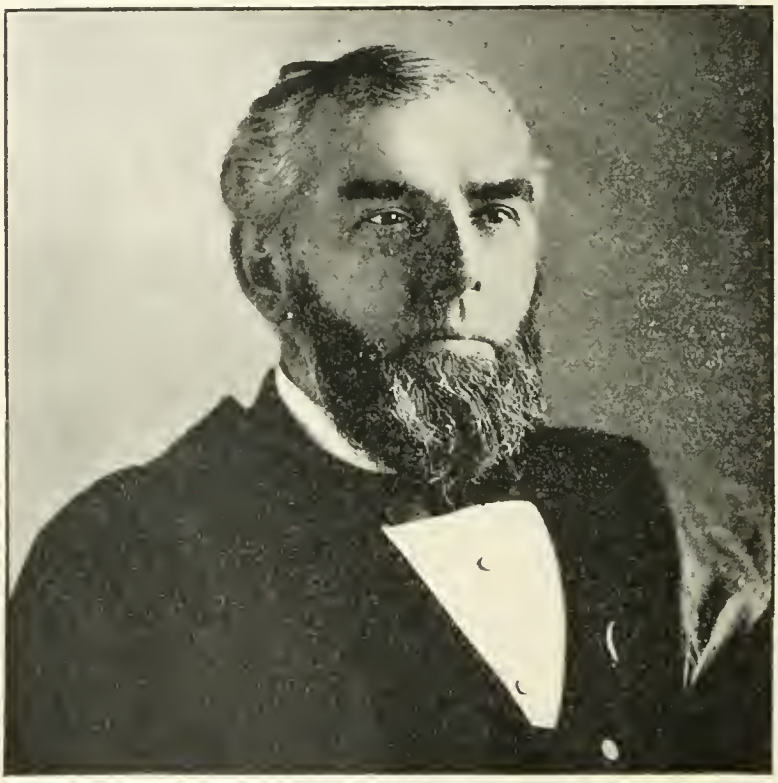
Take out every surplus letter,—
Boil it down;
Fewer syllables the better,—
Boil it down.
Make your meaning plain,—explain it
So we'll know, not merely guess it;
Then, my friend, ere you address it,
Boil it down.

Boil out all the extra trimmings,—
Boil it down;
Skim it well, then skim the trimmings,
Boil it down.
When you're sure 'twould be a sin to
Cut another sentence into,
Send it on, and *we'll* begin to
Boil it down

Obituary.

WILLIAM THOMAS AIKINS, M.D., LL.D.

THE profession in Toronto is again called upon to mourn the loss of one of its oldest and most respected members in the person of Dr. W. T. Aikins, who died on May 25th, after an illness of nearly three years. Deceased was one of the best known and old-



est practitioners in the city, having practised for more than forty years. Dr. Aikins was a son of James Aikins, and was born in Burnhamthorpe, County of Peel, seventy years ago this month. He got his early education in the schools of that section, and after attending college here he went to Jefferson Medical College, Philadelphia, where he graduated with high honors. Upon finishing his

course he came to Toronto, and had practised his profession continuously until his health broke down nearly three years ago. Dr. Aikins was looked upon by the profession as one of the most skilful surgeons on the continent. The degree of LL.B. was conferred upon him by Victoria University ten years ago.

Deceased for nearly twenty years was President of the Toronto Medical School, and was Dean of the Medical Faculty of Toronto University until 1893. For years he was surgeon to the Toronto General Hospital, and was also on the consulting staff.

Dr. Aikins was a prominent member and Trustee of the Metropolitan Church. He was a brother of Hon. J. C. Aikins, ex-Lieutenant-Governor of Manitoba. Dr. H. Wilberforce Aikins, of this city, is one of the eight children of deceased. We take pleasure in reproducing for our readers, a photograph of the deceased, whose countenance was so familiar to all.

The funeral took place on the 27th of May from the residence of the deceased's son, Dr. H. Wilberforce Aikins, and was one of the largest seen in Toronto for many years. It was attended by almost every member of the profession, the floral offerings being especially fine. W. A. Y.

DR. JAMES B. BALDWIN.

Dr. James B. Baldwin, who for many years has resided at 46 Avenue Road, in this city, died on Saturday the 29th of May, after an illness only lasting three days. The deceased, though not in active practice for some years past, was one of the most popular men in this city. He was genial and courteous, in fact was liked by every one who met him. Dr. Baldwin was exceedingly fond of everything military, having been attached to the Governor-General's Body Guard till very recently, and always entered into the work of that regiment with any amount of vim and energy. He was a prominent figure at the annual drill on Niagara Common each year. The doctor was buried with military honors on June 1st.

M. J. HANAVAN, M.B.

M. J. Hanavan, M.B. University of Toronto, 1866, surgeon of Wolseley Barracks, London, Ont., died somewhat suddenly on June 1st, as a result of blood poisoning. Dr. Hanavan's military career began many years ago, when he received a certificate at the Infantry

School at Toronto. He was for fourteen years medical officer in the Twenty-Eighth Battalion, Stratford, holding that office until his appointment at Wolseley Barracks, in September, 1888. The doctor was a general favorite, and his loss will be deeply felt by a wide circle of acquaintances and friends. He was 54 years of age and leaves a wife and several children.

DR. FREDERICK W. STRANGE.

By the death of Frederick W. Strange, Toronto has lost one of its finest surgeons, the medical profession throughout Canada one of its most skilful practitioners and courteous gentlemen. His untimely death, on Saturday morning last, June 5th, caused a feeling of deepest sorrow throughout this city. His place can never be filled in the hearts of his patients and friends, and THE CANADIAN JOURNAL OF MEDICINE AND SURGERY will ever miss an honored name from the members of its staff. Dr. Strange was for many years Surgeon of No. 2 Company, R.R.C.I., and in addition to that held a large number of other appointments. He held a commission of Coroner for the County of York, and sat

from 1878 to 1882 for North York in the Dominion Parliament. He was an ex-Captain of the 12th York Battalion and the Queen's Own Rifles. In his capacity as Surgeon of "C" Company, he served through the North-West rebellion, for which he received the medal and clasp. The deceased was Consulting Surgeon to Toronto General Hospital, and enjoyed by far the largest practice in Toronto. He was a son of the late Thomas Strange, of Sulkamshead, Abbotts, Berkshire, England. After a preliminary education at Bath, he studied medicine in Liverpool, and afterwards at University College, London. From 1866 to 1869 he was Assistant-Surgeon to the London Surgical Home and Hospital for Women, resigning these posts in 1869 to come to Canada. He purchased the practice of Dr. W. B. Geikie (now Dean Geikie) at Aurora, but later moved to Toronto. Underneath the dignified perfect exterior of the man of the world lay the man with the great heart, tender and patient. It is indeed difficult to realize that for this active, useful life the day is done. Brilliant in life, respected in death by comrade, friend and patient alike, Canada mourned her dead and laid him to rest as a soldier whom the nation honored. W. A. Y.

The Physician's Library.

Mental Diseases. A synopsis of twelve lectures delivered at the Hospital for the Insane, Toronto, to the graduating medical classes. By DANIEL CLARK, M.D. Toronto: William Briggs. $1.25.

In the opening chapters of this manual the author speaks of the brain and its relation to mental processes, gives a resumé of the general pathological changes found in brain diseases, and defines insanity. Following this is a practical classification of mental diseases, and clinical pictures of these various conditions are given and best forms of treatment commented upon. The lectures increase in interest as the author discusses such topics as the relation insanity bears to general systemic diseases, the borderland of insanity, heredity, mind stress. The chapters on "Crime and Responsibility" and "The Steps to be Taken to Admit Patients into the Asylums of the Province" are of special import to every general practitioner. We can heartily recommend the book to those for whom it is designed, the senior medical student and the busy practitioner.

It is with pleasure that we acknowledge the receipt of the *Medico Legal Journal*, so ably edited by the Hon. Clark Bell, of New York city. Also the *Indian Lancet*, published by Dr. L. Fernandez, of Calcutta.

Index Medicus.

LAST MONTH'S LEADING ARTICLES.

The name of the journal in which the article appears is indicated by a number in parentheses, and will be found in the "Key" on page 280.

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Actinomycosis. E. F. Buecking, M.D. (55)
Adenoid Vegetations. R. H. Crowley, M.D. (31) May 1st.
Appendicitis, Surgical Treatment of. A. J. McCosh, M.D., F. Hawkes, M.D. (27)
Abdominal, Brain and Automatic Visceral Ganglia. B. Robinson, M.D. (38)
Analgesia. H. Hun, M.D. (3) May 1st and 8th.
Anastomosis, Double Intestinal. J. H. Glass, M.D. (3) May 1st.
Aneurism of the Abdominal Aorta. H. A. Hare, M.D. (45)
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Appendicitis, When to Operate. P. Syms, M.D. (3) May 15th.
Abscess in Connection with Tuberculous Joint Disease. R. A. Hibbs, M.D. (3) May 15th.
Alcoholic Intoxication in a Young Child C. A. Herter, M.D. (49)
Aneurism of the Heart. T. S. Short, M.D. (57) May 8th.
Acute Primary Mastoiditis, Bilateral. M. Kenyon, M.D. (20)
Aphasia. B. Bramwell, M.D. (2) May 8th.
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Broncho-Pneumonia in Children. T. Melvin, M.D. (31) May 1st.
Blistering by Hypnotic Suggestion. T. B. Keyes, M.D. (38)
Bubonic Plague in Bombay. A. G. Viegas, L.M.S. (56) April 1st.

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Cardiac Disturbances from Gastric Irritation. H. Illoway, M.D. (3) May 1st.
Cancer of the Skin. W. S. Gottheil, M.D. (13)
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Collinsonia. J. Adolphus, M.D. (15)
Compound Comminuted Fracture of both legs. J. H. Miller, M.D. (9)
Colles' Fracture by Aid of X Rays. E. R. Corson, M.D. (1) May 8th.
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Chronic Suppuration of Middle Ear. S. S. Bishop, M.D. (21)
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Dysmenorrhœa. J. E. Langstaff, M.D. (30)
Ductless Glands. H. C. Wood, M.D. (27)
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Epilepsy. F. A. McGrew, M.D. (17)
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Foreign Bodies in the Ear by Means of X Rays. P. Fridenberg M.D. (1) May 15th.
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Should the Marriage Contract be Limited by Law. E. T. Bulison, M.D. (22)

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Steel in the Ciliary Body Located by means of Rœntgen Rays. G. E. Schweinitz. (27)

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Surgical Operations Recently Performed in the Macon Hospital. H. J. Williams, M.D. (4)

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Treatment of the Centipede's Bite. W. B. Outten, M.D. (9)

Toxæmia. A. S. Thayler, M.D. (8)

Traumatic Transplantation of the Cilia. G. C. Harlan, M.D. (12)

Treatment of Alcoholism. J. M. French, M.D. (14)

Treatment of Congenital Displacement of the Hip. A. H. Tubby, M.S. (2) May 1st.

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Treatment of Tuberculous Disease of the Hip in its Early Stages. H. Marsh, M.D. (57) May 8th.

Treatment and Prognosis of Catarrhal Deafness in Young Children. J. A. Mullen, M.D. (20)

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Uterine Fibroids. D. A. Allen, M.D. (23)

Varicose Veins, Treatment of. J. O'Conor, M.D. (3) May 1st.

Widal's Test in Typhoid Fever. J. L. Miller, M.D. (36)

W. A. Y.

Key to Medical Publications.

1. Medical Record, N.Y.
2. The Lancet, London, Eng.
3. New York Medical Journal.
4. Atlanta Medical and Surgical Journal.
5. Maryland Medical Journal.
6. Medical Summary, Philadelphia.
7. Scottish Medical and Surgical Journal, Edin.
8. Journal of Medicine and Science, Portl., Me.
9. The Railway Surgeon, Chicago.
10. Archives of Pediatrics, N.Y.
11. Montreal Medical Journal.
12. Philadelphia Polyclinic.
13. International Journal of Surgery, N.Y.
14. Medical and Surgical Reporter, Philadelphia.
15. American Medical Journal (Eclectic), St. Louis, Mo.
16. Medical Bulletin, Philadelphia.
17. Medicine, Detroit.
18. New England Medical Monthly and The Prescription, Danbury, Conn.
19. Canadian Medical Review, Toronto.
20. The Laryngoscope, St. Louis.
21. The Medical Age, Detroit.
22. Buffalo Medical Journal.
23. Cleveland Medical Journal.
24. The Therapeutic Gazette, Detroit.
25. Langsdale's Lancet, Kansas City.
26. Pacific Medical Journal, San Francisco, Cal.
27. American Journal of Medical Science, Phila.
28. The Maritime Medical News, Halifax.
29. The State Hospitals' Bulletin, Utica, N.Y.
30. Brooklyn Medical Journal, N.Y.
31. Pediatrics, N.Y.
32. Bulletin of Pharmacy, Detroit.
33. Magazine of Medicine, Atlanta, Ga.
34. North American Practitioner, Chicago.
35. St. Louis Medical and Surgical Journal.
36. Chicago Medical Recorder.
37. Medical Press and Circular, London, Eng.
38. Medical Brief, St. Louis.
39. Columbus Medical Journal, Columbus, O.
40. Chicago Clinical Review, Chicago.
41. The American Therapist, New York.
42. The Pacific Health Journal, Oakland, Cal.
43. The Diabetic and Hygienic Gazette, N.Y.
44. La France Medicale, Paris.
45. Medical Standard, Chicago.
46. The Medical Times, New York.
47. La Presse Medicale, Paris.
48. Le Progres Medical, Paris.
49. Quarterly Journal of Inebriety, Hartford, Conn.
50. American Journal of Surgery and Gynæcology, St. Louis.
51. The Homœopathic Physician, Philadelphia.
52. Matthews' Quarterly Journal of Rectal and Gastro Intestinal Diseases, Louisville, Ky.
53. California Medical Journal (Eclectic), San Francisco, Cal.
54. Journal of Eye, Ear and Throat Diseases, Baltimore, Md.
55. Chicago Medical Times.
56. The Indian Lancet, Calcutta, India.
57. The British Medical Journal, London, Eng.
58. Annals of Gynæcology and Pediatry, Boston.
59. The American Gynæcological and Obstetrical Journal.
60. American Practitioner and News, Louisville, Ky.
61. The Medical Examiner, New York.
62. The Birmingham Medical Review.
63. The Alienist and Neurologist (Quarterly), St. Louis, Mo.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

'TIS PLEASANT, SURE, TO SEE ONE'S NAME IN PRINT.

To the Editor of the Canadian Journal of Medicine and Surgery.

Dear Dr.—"A book's a book altho' there's nothing in't." The question you ask, in one of your editorial references, as to the possible discovery of some agent or plan by which phthisis can be successfully treated, may be answered very quickly, and, to my mind, very satisfactorily, as it embraces the only plan as yet in sight of as nearly as possible arresting the ravages of "consumption." "Stop the intermarrying of all who have the slightest suspicion of possessing any hereditary constitutional tendency to develop phthisis." The same rule will apply in all cases of inherited diseases. I might finish my remarks at once and take up no more space, but the plan and its practical working are two very different things, however. It must be agitated, written up, and brought before the laity as a subject of great consequence for their consideration. Its possibility rests with them. I do not see why the family physician should not be consulted on a matter involving such important interests. Of course, "Love is blind," and "life is a disease of which we die."

As to the possibility of anyone discovering an antidote or a tuberculo-toxin, and in another way conferring upon humanity a great benefit, as did the renowned Jenner in the application of vaccine, it must not be forgotten that the conditions of the two cases are as different as they can well be.

Phthisis depends upon an hereditary constitutional or systemic defect, and tubercle is developed as a degeneracy and the outcome of a lowered standard. From summit to base, or head to foot, the tendency is downward. Tuberculo-toxin at best can contend only against the effect; the cause remains.

Small-pox is not systemic, it depends upon a pabulum *sui generis* in which the germ incubates and develops into full variola of a milder or severer type. Vaccine pus is not a toxic agent, but it incubates and develops in the same pabulum, and by anticipation exhausts it, thus leaving no nidus in which the germ of variola can develop and serving as an exhauster or prophylactic, only in variola.

Each of all the exanthemata must depend for its development

upon the presence of the pabulum peculiar to it, and it can only be by a substitute peculiar to each, which by anticipation exhausts the pabulum, that we can render the genuine article harmless. That the discovery of such a substitute for each exanthem is within the bounds of possibility, no one will pretend to deny. The subject is important and the field is large. Again, whooping cough, mumps, *et hoc genus omne*, run on parallel lines, each having its own peculiar pabulum on which it thrives.

Typhoid, diphtheria, etc., run upon an entirely different plane from phthisis, or the exanthemata. The bacilli peculiar to each, typhoid or diphtheria, may remain quiet for months, until accident, injury or exhaustion of system lower the standard. The emunctories fail to remove the waste material and thus a nidus is afforded in which these bacilli incubate and develop. In these last it is not unreasonable to look for a preventive by enforcing strict attention to sanitary laws.

But to control tubercle requires entire systemic change, the stopping, if possible, of intermarrying of all who have the slightest suspicion of any hereditary tendency to develop the disease, and every available influence brought to bear to bring about such a consummation. To reduce to a minimum the victims of all diseases resulting from and depending upon hereditary tendency, must be urged, in a common sense way, the, as far as possible, adopting of the rule of "non-intermarriage."

The following principles will weigh on the side of the rule of non-intermarriage in all cases of hereditary disease. It may be laid down as a principle that no systemic hereditary disease, as tubercle, cancer and its many forms, can be treated in any way successfully unless entire change of system can be effected.

The system can be guarded against any disease that occurs only once in a lifetime and depends upon a pabulum for its development, for instance small-pox, provided that a substitute can be secured which will expropriate the pabulum, eliminate it, and thus by anticipation afford protection. The labor to procure a substitute that will safely expropriate and by anticipation eliminate the pabula of scarlatina, rubeola, and all exanthems, will be labor well spent.

As vaccine pus is harmless and expropriates nothing but the pabulum of small-pox, it is not a toxic agent, it is innocuous if its pabulum be not there, so the substitutes, for other exanthemata, mentioned above, if obtained, must be, to be safe, equally harmless as the vaccine.

GEO. PRINGLE, M.D., Toronto.

THE VICTORIAN ORDER OF HOME HELPERS.

To the Editor of the CANADIAN JOURNAL OF MEDICINE AND SURGERY.

SIR,—I very much fear that a layman's criticism of any article in your journal, which I read from month to month with interest, will be regarded as savoring of presumption if not of impertinence. Nevertheless I make bold to offer for your editorial consideration, and for publication if you can see your way thereto, a few remarks upon the article on the Victorian Order of Home Helpers which appears in the issue for May. I am the more willing to venture upon this uninvited communication because I feel that your editorial was written under a misapprehension of facts similar to that under which I myself labored until a few weeks ago; and that, with more light, you may see your way to give the weight of your great influence to the movement, which at present does not command your admiration.

1. The first misapprehension under which you rest is the exceedingly common one that the scheme must fail unless the sum of one million dollars is raised. This is not so. Even if only one hundred thousand dollars were secured, and much more than that will surely be obtained, the good work may be begun, which in the old land has proved so manifest a blessing. Of course the larger the contribution the greater the possible efficiency: but a more modest form of operation is still possible should the desired financial goal be unreached in the jubilee year.

2. You are also mistaken in supposing that imperfectly trained nurses are to be employed. None but those who have received a full course, and whose efficiency is certified by competent authority, will be engaged. This was not the first intention, but careful consideration soon compelled the promoters of this movement to see that it could not command the approval of thoughtful men and women if "half-trained helpers," as you call them, were permitted to drive out of employment those who had been duly qualified for the important work of nursing.

3. My experience as pastor of a large congregation in this city compels me to join issue with you on a point of fact. You claim that the cities do not need the help which it is proposed to give through the establishment of the Victorian Order. You doubtless know the needs of your own city: but speaking for Montreal, where three hospitals are yearly graduating accomplished nurses, most of whom remain with us, I can testify that during the past season even those who could pay for the nurses were not always able to

secure their services, and the fees, none too large, which nurses are obliged to ask, make them a prohibited luxury to the vast majority of the families towards whom I sustain pastoral relations.

Neither do our hospitals, large and numerous and admirably managed as they are, wholly meet the difficulty. Some of the forms of sickness where nursing is so valuable, are either wholly or imperfectly provided for by our hospitals: as, for example, cases of consumption which are pronounced incurable, cases of erysipelas and the like. I am, moreover, occasionally learning of maternity cases where hardship and suffering are caused by lack of nursing, for which under present conditions no provision is made. In my own congregation I could employ one or more members of this new order almost constantly. So far, then, from driving skilled nurses from the field, additional employment would be found for them.

So far as the country is concerned, I can testify as to the need of trained nurses. I have been a country pastor, and, as I write, can recall instances where a member of the Victorian Order would have been as an angel of mercy indeed.

4. You seem to fear that the nurses will suffer in their own self-respect, and feel themselves objects of charity if they are supported in whole or in part by the income derived from this jubilee fund. Why should they? Is the physician, who derives some portion of his support from a benevolent organization whose members he visits, any less a man than his brother who does not? The money will be earned and honestly paid; whence the humiliation?

5. Your expression of fear that the physician will be displaced by the nurse becomes groundless in view of the fact that none but duly qualified nurses will be employed, and these, as past experience teaches, are in the best sense helpers, not hindrances, in the good work which your noble profession does so well.

I may add that members of your own profession in this city do not appear to share in the fears which you voice in your journal. On the contrary, many of the leading physicians are amongst its most enthusiastic supporters. I venture to enclose for your personal reading a printed copy of an address by Dr. Craik, Dean of the Faculty of Medicine of McGill University. So far as I know, his views are fairly representative of the position of the more prominent physicians of Montreal.

With apologies for trespassing upon your attention,

I am, dear sir,

A Montreal Pastor.

Montreal, May 11th, 1897.

Commercial Department.

A CASE OF URINAL FISTULA.

Gunhava Lane,
Fort Bombay, India, November 14, 1896.

A young Parsee, aged nineteen, came under my treatment on May 16th, 1896, for a urinal fistula on the under surface of the urethra and midway between the anal orifice and the base of the scrotum. The external opening was found, on examination, to be half an inch in length, and the internal one admitted the bulbous end of the probe. The skin on both sides of the external opening was found thickened. The urine during its passage through the urethral canal partly escaped through this fistulous opening.

Previous History.

The patient had syphilis or gonorrhœa about three years ago, and had a large abscess in his perineal region, but for the fear of the surgeon's knife he did not show it to any medical man. He called upon a quack and went under his treatment. The abscess burst open itself after a month from its commencement, producing a fistulous opening in the urethra.

Symptoms which Guided me to Select the Medicine and Bring About a Radical Cure.

He assured me that the irritability was due to his constantly getting painful boils on the head and neck. He had then a good many small boils and pimples on his scalp which were sore to the touch, and caused his hair to fall out considerably. He became very susceptible to the cold, which he attributed to the falling out of his hair. On account of getting constant attacks of cold, he used to complain of a good deal of pain in the throat, aggravated during the act of deglutition. On examining the throat, I found both tonsils enlarged and the whole throat congested. He was subject to dry and hard stools. There was great burning during the passage of both stools and urine. Painful erections in the night would sometimes disturb his sleep. These were then the principal

symptoms which guided me to select the following prescription as being the best medicine for him:

℞ Magnes. sulph ..... ℥iv.
Potass. acetas ..... ℥iss.
Tinct. buchu ..... ℥ss.
Tinct. hyoseyami ..... ℥ss.
Aqua, pure ..... ℨiii.
Ft. mist. Sig.: 3 tis horis sumend.

He was given the above prescription thrice daily for two weeks continually. He did very well under it. Almost all his old symptoms disappeared, but new ones appeared in their place. He began to complain from the beginning of June of soreness over the pubes, and passed urine in a thin stream mixed with pus. I stopped the prescription and gave him the following medicine:

℞ Stearn's hæmoferrum (liquid) ... . ℥i.
Aqua, pure ..... ℨiii.
Ft. mist. Sig.: 3 tis horis sumend.

Above prescription was given three times a day for nearly a week, when these symptoms disappeared and the fistula also completely closed. I should candidly state here that when I took up this case I had not the remotest idea of curing the fistula permanently. My idea was that the patient would be relieved of his troublesome symptoms, especially the painful pimples on the scalp. This is an illustration of what hæmoferrum can achieve where formerly surgical interferenee was the only resource.

I remain, sirs, yours very respectfully,

S. B. Shroff.

Messrs. F. Stearns & Co., Detroit, Mich., U.S.A.

BIRTH.

On May 19th, at Unionville, to Dr. and Mrs. J. Watson, a son.

MARRIAGES.

On May 4th, Cecilia E. Jeffrey to Dr. George H. Matthewson.

On May 25th, Bessie, daughter of the late James Farrell, Esq., of Toronto, to J. Percival Lee, M.D., of Kingston.

DEATHS.

On Monday, May 24th, William T. Aikins, M.D., aged seventy years. Interred May 27th, at the Necropolis, Toronto.

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